THE STANN CREEK REGIONAL ARCHAEOLOGY PROJECT: REPORT OF THE FIFTH (2019) FIELD SEASON

Edited by

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Canada

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Table of Contents

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Chapter 1. The Stann Creek Regional Archaeology Project: Introduction to the 2019 Investigations

Meaghan M. Peuramaki-Brown (Athabasca University)

Shawn G. Morton (Northwestern Polytechnic)

The 2019 season of the Stann Creek Regional Archaeology Project (SCRAP) represents our fifth season of archaeological exploration and excavation at Alabama, and the second season of our current four-year research program, funded by the Social Sciences and Humanities Research Council of Canada (SSHRC) Insight Grant. The Alabama townsite is located on the Greene Groves citrus orchard and surrounding Crown Land amid the lower foothills of the Maya Mountains (less than 20 min walk from the monumental core).

The overarching research discussed in this introduction focuses on understanding the tempo and tone of growth and development at the Late to Terminal Classic (ca. 700-900 AD) townsite of Alabama in the southern portion of the Stann Creek District of East-Central Belize. We address this goal by applying the geographic concept of rapid-growth community or "boomtown" (Peuramaki-Brown and Morton 2019b). By focusing on this small, unique frontier centre—while many Mayanists are concerned with core capitals—research at Alabama is enhancing our appreciation of the diverse, complex, and dynamic interplay between ancient Mayas, their landscapes, activities, and institutions in a little-studied area of the eastern lowlands. Our research at the townsite focuses on addressing the following questions:

- **Where** and **when** did growth and development occur at Alabama?
- **What** characterized growth and development at Alabama (e.g., complexity, organization)?
- **Who** took part in growth and development at Alabama?
- **Why** did growth and development occur at Alabama?
- **How** were growth and development sustained at Alabama?

In 2019, we returned to Alabama with our permit [IA/H/2/1/19(11), Accession No. 10465] granted from the Belize Institute of Archaeology for investigations that ran over the course of ten weeks (May 20th-July 26th, 2019), including one week to attend the Belize Archaeology Symposium. This chapter introduces the site and region, a general summary of previous and proposed research, and introduction to our 2019 results.

Alabama (Site AL-52, Government of Belize designation 33.184.002)

The area was initially named *Alabama* (a.k.a. *Alabama Site*, *Alabama Ruins*), meaning "cleared forest" in Muskogean, by the Waha Leaf Banana Co. owners in the 1950s and adopted for the archaeological site in the 1970s by Elizabeth Graham. In the 1980s, J. Jefferson MacKinnon renamed the site *Chacben Kax* (a.k.a. *C'hacben K'ax, Ch'akben K'aax, Ch'akbe'en K'aax*), meaning "recently-cleared forest" in Mopan (ch'akbe'en "milpa roza, nombre que se da al terreno recien tumbado y quemado" + k'aax "bosque, montaña, selva, campo, monte de arboles"; or more literally "forest that has been cleared on someone's behalf" [Marc Zender, personal communication, 2014]). SCRAP continues to use the name Alabama to recognize historical happenings in the area, common usage in the nearby community of Maya Mopan, and the official governmental designation. The site's ancient name remains unknown.

Property

The property that includes the site has belonged to several companies/individuals since the 1950s. This historical chronology of the property is added to as SCRAP members come across additional information.

- 1950's-1967: Waha Leaf Banana Company, a.k.a. Alabama Plantation, operated by Greene & Atkins Banana Co. Owners were M.D. Greene and J. Atkins, based out of Mobile, Alabama (Hubbard 2000:7; Moberg 1997:34-35; see also Bulmer-Thomas and Bulmer-Thomas 2012:133).
- 1967-1970: Property sold to a "pair of European investors" (Moberg 1997:35).
- 1984: J. Cullen, missionary and original citrus planter
    - "In 1984, an American missionary by the name of John Cullen came to the village of Maya Mopan and asked the people to join his church so that he could help them with their daily needs. He also requested 300 acres of land from the government, saying that it will be for the village, and asked the villagers to donate labor to plant fifty acres of citrus, so one day it will benefit the village. He also promised electricity and a hospital. The village gave him free labour but, in the end, John Cullen never kept his promises" (TMCC & TAA 1997:113).
- 1980s/1990s(?): Outreach Ranch, owned by J. Collier (MacKinnon 1987).
- 1996: M. Dunken, citrus operation
    - "In 1996, a man name Mike Dunken moved in and started to work the same land where the villagers gave their free labor for the citrus plantation. When the village council chairman asked Mr. Dunken if he knew what he was doing, Mr. Dunken said that he bought the land from John Cullen, and nobody can stop him from working it" (TMCC & TAA 1997:113).
- 2007(?)-2020: Greene Groves & Ranch Belize Ltd. citrus orchards, owned by G. Greene.
- 2020-present: Greene Groves & Ranch Belize Ltd. citrus orchards, owned by Amanda Cabot and Peter Kjellerup (Silk Grass Holdings US LLC).

Research & Exploration

Over the past 50 years, archaeologists have conducted various investigations in and around the Alabama area:

- 1970s: The Stann Creek Project, directed by Elizabeth Graham. General survey and testing throughout the Stann Creek District, including a portion of the Alabama site (Graham 1994; Peuramaki-Brown and Graham 2017).
- 1980s: The Point Placencia Archaeological Project (PPAP), directed by J. Jefferson MacKinnon. The survey, testing, and excavation/consolidation of monumental architecture at Alabama and secondary satellite sites (MacKinnon 1987, 1988a, 1988b, 1989a, 1989b; MacKinnon et al. 1993; Schafer 1987; Walters 1988).
- 1990s: The Southern Highway Archaeological Assessment: Field Reconnaissance, directed by Peter S. Dunham. Reconnaissance along highway route of Stann Creek and Toledo Districts, including visit to Alabama (Dunham and Wanyerka 1994a and 1994b).
- 2014-present: The Stann Creek Regional Archaeology Project (SCRAP), co-directed by Meaghan Peuramaki-Brown and Shawn Morton. Phase I and II reconnaissance and testing at Alabama (Howie 2019; Jordan et al. 2021; Peuramaki-Brown 2015, 2016a, 2016b, 2017; Peuramaki-Brown and Morton 2018, 2019b, 2021, 2022; Peuramaki-Brown and Schwake 2014; Peuramaki-Brown et al. 2017a, 2017b, 2018, 2020; Williams

et al. 2017). Phase I reconnaissance and lidar survey at Pearce Ruins 10 km to north of Alabama (Peuramaki-Brown and Morton 2019a).

Dates

Some absolute and relative dates are currently available for Alabama:

- Radiocarbon: 1980s PPAP epicentre testing (on floor and fill deposits, Str. 3)
  - cal. AD 760 ± 80 yrs. (Wis-1914)
  - cal. AD 850 ± 70 yrs. (Wis-1915) – epicentre, PPAP
- Obsidian hydration: 1980s PPAP epicentre testing (on floor + fill deposits, Str. 3)
  - cal. AD 874 ± 77 yrs. (MOHLAB) – epicentre, PPAP
- AMS: 2016 SCRAP settlement testing (habitation debris & earthen-core mounds)
  - cal. AD 260-280 and cal. AD 325-420 (2 sigma, 95% probability; Beta-456254)
  - cal. AD 640-680 (2 sigma, 95% probability; Beta-457816)
  - cal. AD 655-720 and cal. AD 740-765 (2 sigma, 95% probability; Beta-457817)
  - cal. AD 675-780 and cal. AD 790-870 (2 sigma, 95% probability; Beta-457818)
  - cal. AD 885-995 (2 sigma, 95% probability; Beta-457819)
  - cal. AD 895-1020 (2 sigma, 95% probability; Beta-457820)

  **note: 2019 dates can be found in the following chapters of this volume.*
- Artifacts: 1980s PPAP epicentre testing, 2014-2019 SCRAP settlement survey/testing
  - Late facet Late Classic to Terminal Classic, Early Postclassic (ceramic, lithic)
  - Early Classic (ceramic)

Description

Alabama abuts the eastern slopes of the Maya Mountains—a projection of metamorphic and igneous rock, including granites and derived clays—that forms a sharp geological contrast to the otherwise karst landscape of the Maya lowlands. The site sits on an alluvial plain, with foothills on three sides, along the banks of the Waha Leaf Creek, which runs 20 km east to the Placencia Lagoon and Caribbean coast, passing through broadleaf forest and pine savannah along the way. Alabama was home to roughly 600-900+ people, based on our ongoing settlement survey and accepted calculation methods.

The monumental core (epicentre) consists of 20 separate structures (the tallest, Str. 3, measuring ~7.5 m), four plazas, and a sacbe (causeway). These are distributed over 2.48 hectares (not including Strs 19 and 20, or the sacbe), slightly larger than the monumental core of Nim Li Punit in Southern Belize (see calculation process in Houk 2015:240, Tab. 10.2). Fourteen (14) plain granite monuments have been recorded.

East-Central Belize

East-Central Belize (Figure 1.1) is roughly delineated to the north by the end of the Maya Mountains and the beginning of a relatively flat landscape and bigger/longer rivers; to the west by the eastern foothills and face of the Maya Mountains; to the east by the Caribbean Sea; and the south by the north end of the Bladen Formation, south of the Swasey Branch of the Monkey River. This same area is roughly that of the modern-day Stann Creek District.

The nucleated settlements of the region are found primarily inland, toward the eastern foothills of the Maya Mountains. These minor and major civic-ceremonial centres share several common material culture patterns, which may identify East-Central Belize as a material culture sub-region of the eastern Maya lowlands, similar to neighbouring Southern Belize (Braswell and Prufer 2009; Graham 2001; Leventhal 1992; MacKinnon 1991). These features include location atop alluvial terraces with direct access (less than a day's travel) to coastal lagoons and shores via navigable rivers; low, large, non-vaulted architecture; earthen architectural construction core; large borrow pits surrounding/enclosing monumental architecture; ashlars, megalithic slabs, and stelae-altars of non-limestone rock (e.g., granite, slate); a general lack of epigraphic materials; and special-context use of imported limestone (e.g., ball court markers, corner stones, tomb walls).

Despite significant research, East-Central Belize remains one of the most poorly understood regions of the Maya lowlands, particularly in terms of ancient settlement processes, including population nucleation (increasing population densities relative to surrounding areas); the presence of multiple and diverse economic activities (including craft specialization); and central-place relationships along a continuum of rural-urban localities, all of which emphasize "urban-ness" and "rural-ness" to varying degrees (urban society; see Grauman Wolf 1980; Leeds 1980; Siembieda and López Moreno 1998; Zenner 2010).

Figure 1.1: Elevational map of Central Belize, showing inland and coastal archaeological sites.

In the humid neotropics, the relationships between humans and the environment are distinctive enough to lead to unique forms of settlement development and, hence, diverse forms of urban and urban-like centres. We argue that East-Central Belize presents a distinct region, with unique forms of settlement and urban-like development dependent on several factors. These include local geology, significant micro-management of local environments, and the integration of residents within multiple social, political, and economic spheres of varying scales related to resident agency, local geography, and known transportation/communication corridors.

Concepts related to settlement and urbanism are not only those of processes but also dynamics and "mechanisms" (Flannery 1968), linked intimately with local histories and environments as well as larger systems in action (politics, economics, societies, ideologies, ecologies). Thus, an archaeological attempt to understand such complex developments must examine the end results and the beginnings and changes over time, ideally leading to an understanding of settlement tendencies in a given region, the development of associated socio-environmental networks and their ultimate undoing. Any attempt to understand these processes, dynamics, and mechanisms in a given region should consider four diachronic and dynamic elements:

1. Population development (chronology) and scale of land conversion.
2. The social fabric of resident populations.
3. Integration beyond the individual household (e.g., community, infrastructure, services).
4. Situation within larger social, economic, and political organizations.

SCRAP Research at Alabama: Past, Present, and Future

We consider the site of Alabama to be a boomtown of the ancient Maya world. Previous research (2014-2016) demonstrated the *where* and *when* of this rapid-growth community development in East-Central Belize, dated overwhelmingly to the late facet of the Late Classic to Terminal Classic periods (ca. 700–900 CE). Our current research, initiated in 2018 and delayed by two years (2020 & 2021) due to the COVID-19 pandemic, focuses on a unique approach to understanding *why* and *how* the ancient boomtown development and local resources as motivators of industry, mobility, and short-term relocation. Broader fundamental questions underpin this socio-natural study in archaeology: Where, when, and why do people choose to colonize a landscape? How do they survive, making use of available resources? How do they interact with and understand people, spaces (geographies), and things (material items) both near and far (Hutson 2017; Rockman 2003; Scarborough & Valdez 2003, 2009; van der Leeuw & Redman 2002)?

Our earlier phase of research (2014-2016) addressed the where and when of Maya boomtown development by initiating investigations of the monumental core (epicentre), settlement biography, and resource procurement. *This research phase is required to examine such development further, expanding from the concrete results of previous research and assembling a new suite of tools to pursue the following questions:*

Q1: *Why* did this rapid growth and development occur at Alabama?
Q2: *How* was rapid growth and development supported at Alabama?

Our current research takes an archaeological, geological, and biochemical approach to these questions. *Two hypotheses* shape the structure and direction of this research (detailed in the following pages), which focus on local resource exploitation and in-migration.

<u>Boomtowns: Relational Geographies and Rural Complexity</u>

Residents express complex understandings of fundamental human-environment relations and relational geographies as part of the development and sustainability of rapid-growth communities, or "boomtowns" (Barnes 1988; Barth 1975; Rodriguez 1982). These remarkable settlements arise in regions typically perceived as severely disadvantaged or isolated frontier zones: a familiar description of East-Central Belize (Stann Creek District) in ancient Maya times. They are typically located along boundaries between shifting geopolitical entities, although many reasons account for rapid settlement growth throughout human history and prehistory.

"Boomtowns" are settlements that experience rapid population and economic growth, often in response to environmental opportunities and shifting socioeconomic and sociopolitical dynamics (Cons and Eilenberg 2019; Murphy et al. 2018; Taussig 2018; Woodworth 2017). They have emerged in different contexts around the world—as far back as ancient Mesopotamia (Barbier 2011)—and many examples of Belizean communities have undergone similar processes, especially in the Stann Creek District (Bulmer-Thomas and Bulmer-Thomas 2012). The character of these communities reflects myriad influences, such as their diverse social fabric reflective of migrant populations and a fast pace and scale of urban development (Caraher et al. 2017; Ennis et al. 2013; Foster and Taylor 2013; Jacquet and Kay 2014; Szolucha 2018). Within this context emerges distinctive socioeconomic institutions—organized groups of people that use regularized practices, labour, and resources to achieve shared goals—that help structure and rationalize social and economic life (North 1986; Ostrom 1990). These socioeconomic institutions may include, for example, labour collectives, associations of specialized craftspeople, and trade organizations (Blanton and Fargher 2016; Carballo 2013; Gudeman 2016; Holland-Lulewicz et al. 2020).

The development of communities, including boomtowns, is shaped by complex and intimate interactions between people, spaces, and things. Two concepts aid in assessing the archaeological record of East-Central Belize, as the complexities of this location result from responses of both those who lived in these temporalities and those who analyze and react to them for various reasons, archaeologists included. Together, these diverse groups are mutually entangled and co-constitute the region through various types of engagements (Graham 1998), which relational geographies and rural complexity make manageable.

The notion of *relational geographies* is useful to unpack imbricated processes through its framing of geographic developments as open-ended, mobile, networked, and actor-centred (Jones 2009). Relational geographies thus allow us to understand space as physical and conceptual, and as entangled within social, economic, and political processes (Bathelt & Glückler 2003; Thrift 2003). Space reflects ways of moving, knowing, interacting, and living (Crampton & Elden 2007; Hodder 2012; Lefebvre 1991, 2003; Malpas 2012), since the spaces through which we move daily are constituted by human experience (Heidegger 1971; Soja 1996). This experience itself is grounded in the surrounding material things—other "living" or "non-living" elements (depending on beliefs), including objects we make, exchange, and discard (Hendon 2010; Watts 2013).

We invoke the concept of *rural complexity* (Barnes & Hayter 1994; Falconer 1987; Falconer and Savage 1995; Iannone & Connell 2003) when geographic developments (village or town sites) in rural settings are interpreted as "urban-like" because of exemplified social institutions, physical realities, and human-environment relations normally associated with urban locales (Guengerich 2017; Paz 2002). The settlements that typically represent boomtown development around the world, and often exemplify rural complexity, flower rapidly in response to several factors: (1) resources and environmental opportunities or challenges, and (2) socio-economic or socio-political fluctuations—which include the outcomes of centralizing, decentralizing, colonization, migration, and defense strategies (Benson et al. 2009; Bradbury

1979; Isendahl et al. 2014). Such development has been traced back as far as the Sumerian Period of ancient Mesopotamia, attributed to valued resource extraction (Barbier 2011). Social scientists (e.g., Woodworth 2011, 2015) recognize unique boomtown flows of people, spaces, and things through four interwoven elements:

- a relatively rapid pace and scale of population growth and land conversion
- a unique and changing social fabric due to sudden population appearance
- the swift advent of functional and place-making features, such as hallmark urban elements
- situation in political and/or economic frontier zones

Boomtown Alabama: Early Findings

Located along the eastern edge of the Maya world, rapid development and a short period of continuous occupation characterized the frontier urban-like centre of Alabama. This town had a small population, home to approximately 1000 people at its peak. However, it featured many urban hallmarks typical of more extensive and longer occupied Maya communities, such as a ball court, temple/pyramids, plazas, roadways, and monuments (Figure 1.2) (Houk 2015; Peuramaki-Brown 2017; Peuramaki-Brown and Morton 2019b). The landscape of the surrounding region offered access to diverse and rare natural resources, including economically valued trees and plant cultivars, such as pine and cacao, and environmentally distributed minerals, granites, and clays (Dunham 1996; Graham 1987, 1994; Peuramaki-Brown et al. 2020). Resource development at Alabama precipitated the emergence of socioeconomic institutions, which we hypothesize integrated its households through specialized production, consumption, and exchange practices. Therefore, our Phase III excavations aim to extensively excavate and analyze a sample of residences at this site to identify specific household activities related to participation in these institutions and examine how this participation, in turn, affected social organization in this "boomtown" community (Figure 1.3).

In previous SCRAP seasons (2014, 2015, 2016, 2018), teams of researchers, students, field assistants, and volunteers—both foreign and local—have *mapped the monumental core; conducted a systematic GPS settlement survey and surface collection; piloted preliminary sourcing studies of granite, ceramic, and obsidian artifacts, as well as building materials; and initiated test excavations at multiple mounds (domestic platforms) in two settlement zones as well as at two structures of the monumental core.* Along with results of preliminary investigations in the monumental core from the 1980s (MacKinnon 1993 et al.), multiple lines of evidence exist in support of the boomtown designation:

- The presence of hallmark Maya urban features (Houk 2015), including a causeway, large plazas, a ball court, reservoirs, temple pyramids, and a simple palace complex.
- Strict orientation of buildings comprising the epicentre, reflective of a short planning and construction program that was highly planned and coordinated (Smith 2007; Peuramaki-Brown and Morton 2019a).
- Few artifacts in the earthen cores of monumental and domestic platforms, atypical of Maya construction that incorporates refuse and offerings. This is reflective of limited pre-construction occupation or alternative cultural behaviours.
- Single-phase construction platforms of the monumental core constructed during the late facet of the Late Classic period (ca. 700–800 CE), with use extending into the Terminal Classic period (ca. 800–900 CE), based on ceramic, carbon-14, and obsidian hydration

dating. We have observed a similar pattern in the settlement, where surface collection from all mounds resulted in late facet Late Classic to Terminal Classic materials, with some Early Postclassic. These results were confirmed through ceramic chronologies and accelerator mass spectrometry (AMS) dating of charcoal from test excavations at multiple mounds.

- A possible Early Classic occupation, with a subsequent abandonment period of a couple of hundred years in the monumental core and settlement zones. This is evidenced by a general lack of materials and contexts dating to the early facet of the Late Classic and significant flood deposits in the settlement zones (identified in 2019). Additionally, in 2018 we located an Early Classic platform below the surface level of Str. 1-2 in the monumental core, with an entirely different orientation and covered over by the terminal plaza.
- A predominance of single mound settlement sites (groups) and a lack of distinct mound group "clustering," suggesting the absence of neighbourhoods (Smith 2011; Smith et al. 2015), which is a common observance in boomtowns (Freudenburg 1982, 1986; Greider & Krannich 1985a, 1985b).

Our ongoing research continues addressing the where, when, and what of this development while also questioning the *who*, *why*, and *how*. Further study is required to understand this development, expand from the concrete results of previous research, and assemble a new suite of tools to pursue the above questions.

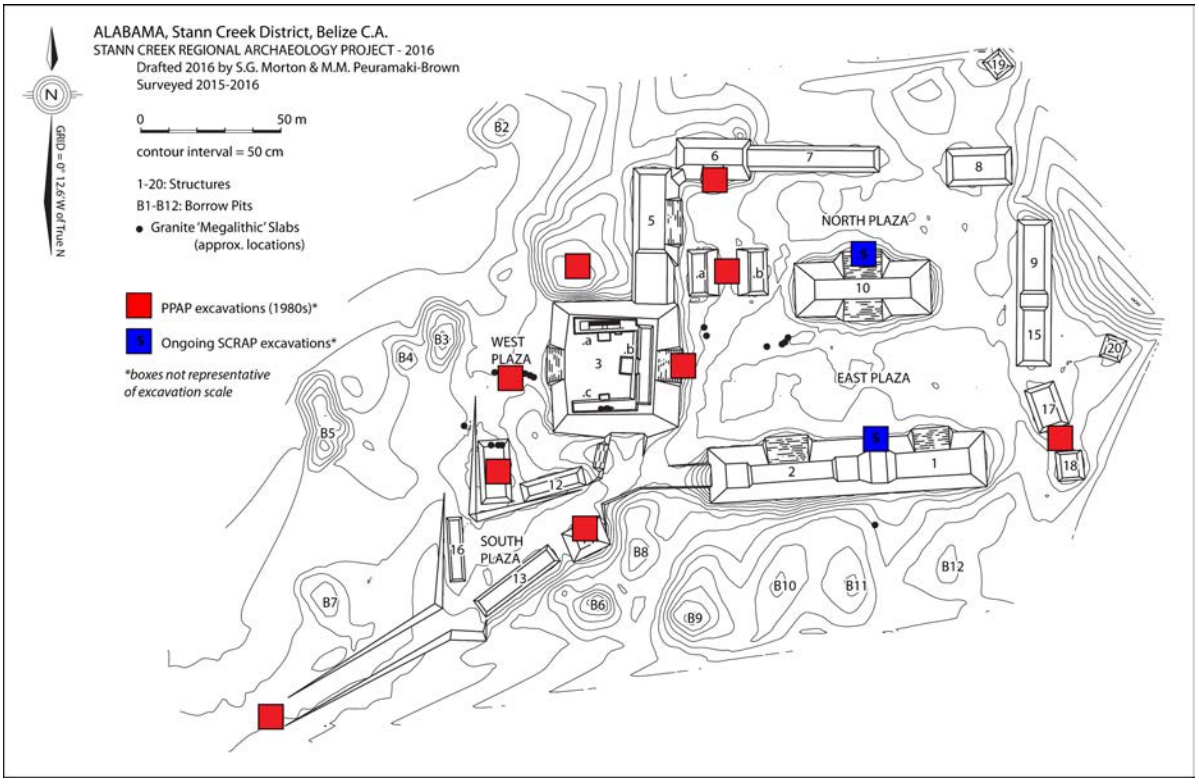

Figure 1.2: Map of monumental core of Alabama, showing location of 1980s PPAP excavations and ongoing SCRAP 2018-2019 excavations at Structures 10 and 1/2.

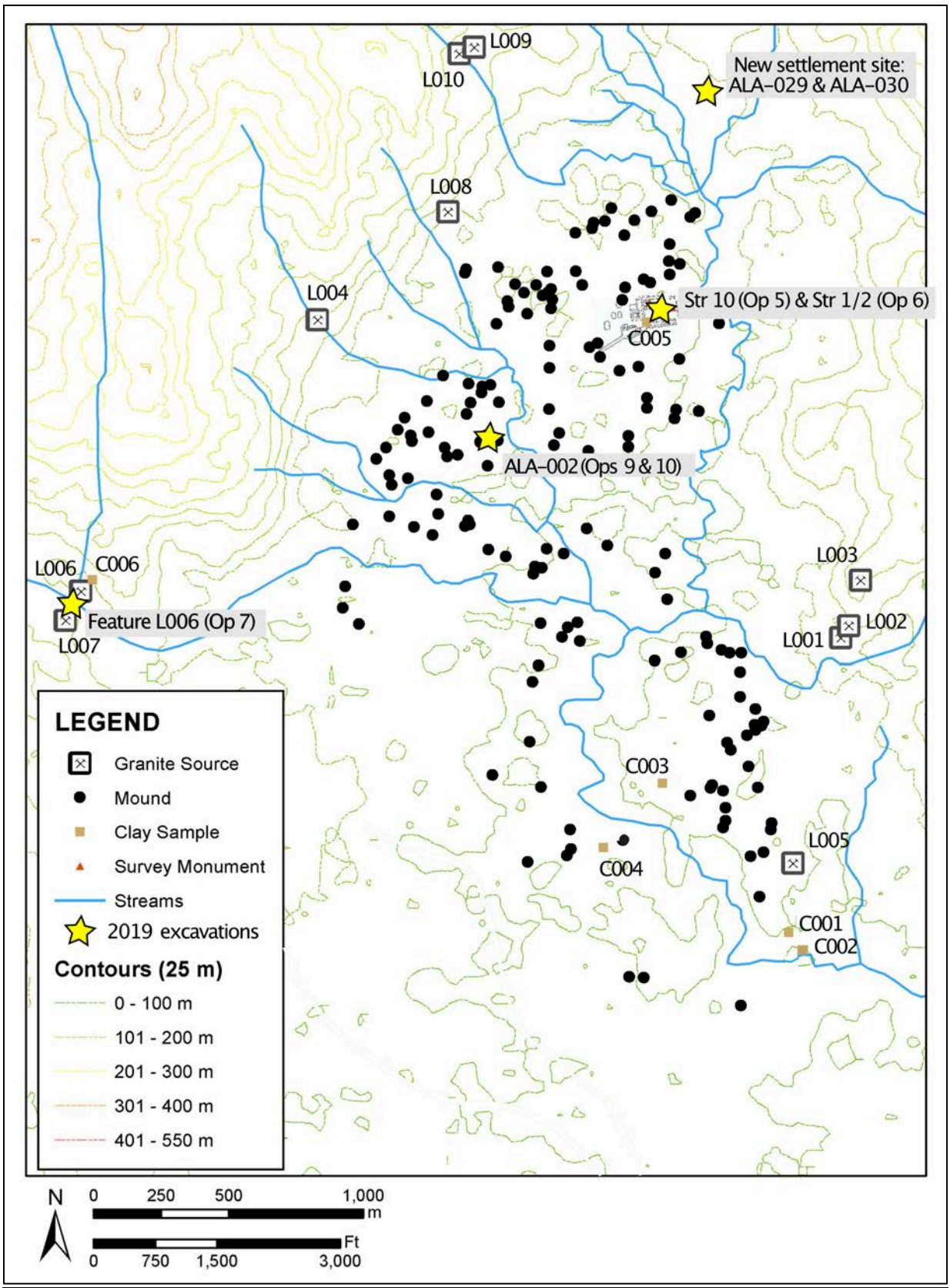

Figure 1.3: GPS map of settlement zone of Alabama, showing location of 2019 excavations.

Hypotheses

Our research to date has resulted in two primary hypotheses regarding the *why* and *how* of Alabama's boom. We anticipate that these lines of inquiry will not be mutually exclusive and will coalesce around intersecting factors.

H1: Settlement development is related to local resource exploitation. The development of a boomtown is often associated with nucleated populations (local or foreign) aimed at exploiting valued resources for commercial (market exchange) purposes—for example, a mining town full of miners and service providers (Murillo 2016)—with access to significant trade/communication corridors (Innis 1977). Archaeological study of the link between community development and resource exploitation is critical to understanding how dynamic cultural processes articulate with natural systems (Rockman 2003). Our archaeological study at the ancient Alabama townsite explores this topic from a deep-historical narrative. We examine the links between integrative economic strategies of households and the development of rapid-growth communities. Situated along the eastern frontier of the Maya lowlands, rapid development and growth characterized Alabama. Residents of this community took advantage of its unique ecological and geological landscape. It offered them direct access to various economically valued and diverse natural resources, including rare trees, plant cultivars, and geological commodities, such as pine, cacao, rare minerals, geographically dispersed minerals, and unique clays.

We hypothesize that the rapid growth of Alabama was in direct response to economic opportunities presented by the local availability of these niche natural resources. The excavation and fine-grained analysis of artifacts and soils from a sample of residential structures at this site will clarify how, and to what extent, exploitation of niche resources structured household economies and how the economic strategies of these households, in turn, influenced the developmental trajectory of the community.

We know that commerce existed at Alabama based on easy access to a major coastal trade route. This is reflected in the widespread distribution of non-local material commodities among residents, such as obsidian (Guatemala, Honduras, Mexico) and Belize Red and Ahk'utu' moulded-carved ceramics (Belize Valley and Northern Belize). But what did residents offer in return and was this site a focal point, "bulk-breaking point" (Dunham 1996: 331), or gateway (Burghardt 1971) for trade in the region? Our research has begun to identify and investigate various valued local (0–20 km) resources exploited by the Alabama Maya, including granite, clays, salt, and cacao.

Granites are limited to specific geographic localities in the Maya lowlands, and the Alabama Maya had direct access to extensive outcropping sources forming the Cockscomb pluton of the Maya Mountains. We have identified evidence for granite working—debitage, preforms, and associated tools (McAnany 2010)—to produce architectural blocks and ground stone tools (e.g., *manos* and *metates*) in multiple settlement areas through surface collection and test excavations. We have also identified potential raw material extraction sites within the Waha Leaf Creek valley and surrounding foothills. We know that granite implements were traded widely throughout the Maya world (Graham 1987; Shipley & Graham 1987; Ward 2013). Our own preliminary macrovisual, microscopic, and geochemical studies have confirmed the presence of some Cockscomb-derived artifacts at archaeological sites over 100 km away via known trade routes (Peuramaki-Brown & Tibbits 2015; Potter 2018; Tibbits 2016).

East-Central Belize is also a source of distinctive natural clays formed from igneous and metamorphic parent material vs. the weathering of carbonate rock prevalent elsewhere in the Maya lowlands (Bartlett et al. 2000; Jordan & Prufer 2017). Graham (1994) hypothesized that residents of the region were involved in exchanging these clays, desired for their unique visual and textural characteristics. Our preliminary comparative petrographic study of local clays and surface-collected pottery vessel fragments has identified multiple locally produced pottery types.

We also found "foreign" pottery from production localities to the south (Bladen Formation) and north (Hummingbird Batholith) of Alabama (Howie 2019; Howie and Jordan 2018; Jordan et al. 2021; Peuramaki-Brown et al. 2017a; Chapter 6, this volume). Additional connections are indicated by pottery containing crushed pottery fragments (grog) originating from the west (Belize Valley), along with recognized ceramic types originating from other subregions of the Eastern Maya Lowlands.

Salt is essential to human survival, particularly in the humid tropics; the ancient Maya also used it as a flavouring and preservative (McKillop 2002). The Placencia Lagoon salt works sit 20 km east of Alabama, dated to the Late to Terminal Classic (MacKinnon 1989a). Sills (2016) proposes that the Maya of Alabama did seasonal work at these specialized sites since they lacked a permanent settlement along the coast. Pervasive in the Alabama settlement is a standardized jar form (rim sherds only) with distinctive macroscopic paste characteristics, which may have served as a salt transport container.

Finally, cacao has historically grown in the region and exists throughout the Alabama area today (Dunham 1996; Evans 1948). This resource is limited to where it can be successfully grown in the lowlands and was used as a currency in the Maya world and beyond (McNeil 2009).

H2: Settlement is related to migration linked to the Classic Period "collapse." When Alabama was experiencing its boom, many other Maya communities began experiencing dramatic, even catastrophic, declines. These were marked by the complete collapse of elite socio-political institutions and economic upheaval due to disruption of trade networks and regional politico-economic turmoil (Demarest et al. 2004; cf. Aimers 2007). Many cities and towns were eventually abandoned, with local climatic events (e.g., drought) and even warfare worsening an already grave situation (Iannone 2014; Webster 2002). The predominant hypothesis is that many populations ended up in the Northern Yucatan generations later; evidence of the influx of migrants at sites in Northern Belize offers clues to more immediate population movements (Cucina 2015). How new settlements like Alabama fit into the larger regional picture of the lowlands is unclear. Did the community constitute a colonizing group who migrated together from a single location, or did people from diverse locations coalesce there, searching for opportunities and more stable surroundings? How would "foreign peoples"—a problematic notion as "The Maya" comprise many languages and ethnic groups (Beyyette & LeCount 2017)—have adjusted to life in the region, which is physically quite distinct from the rest of the Maya lowlands?

Current evidence of a foreign presence at Alabama includes the specialized use of limestone and chert—resources not found naturally in East-Central Belize—possibly signifying populations from karst areas of the lowlands. A few *mano* stones made of granite from the southern edge of the Belize Valley—possibly heirlooms brought in by migrating populations—have been an abnormal finding since this is a granite-rich area. Our petrographic analyses have revealed the presence of potting techniques unique to Northern Belize and the Belize Valley, but these pots use local materials. Access to finished obsidian products of diverse source origins by entire settlement sections, independent of socio-economic factors, are thought to show fundamental differences in population identities and spatial organization, possibly reflecting different origins and established trade relations (Williams et al. 2017).

Finally, Graham (1985) has noted that the 8th century CE Maya centre of Mayflower in the northern end of the district was quite different from earlier sites in East-Central Belize in terms of monumental core layout and architectural styles. The site also lacked debris in its architectural construction core. Significantly, the different patterns at Mayflower may reflect cultural preferences, indicating that different people with different building practices suddenly appeared in the area. It is like patterns at both Alabama and Pearce.

In sum, in the absence of human remains (currently non-existent at Alabama), we examine domestic contexts to compare everyday life practices at Alabama. As a final note, we will *manage the scope of this research* by deferring a third hypothesis related to the Pearce site, 10 km to the north, to a future research endeavour. Pearce also appears to have boomed simultaneously, suggesting Alabama may have emerged as part of more extensive political consolidation processes based on our preliminary reconnaissance. To properly investigate the relationship between these two settlements requires a comparable research program at Pearce—an intentional focus of our longer-term (10+ years) research plans in the area. Lidar survey flown in 2019 (reflown in 2022) will help us pursue these plans.

SCRAP 2019 Season Summary

Data collection took place in Belize over ten weeks (May 20th to July 26th, 2019): one-week setup, eight weeks of main excavation, and a one-week shutdown/lab session. One mid-season lab week/conference week was also included.

Permission in 2019 was granted by the Institute of Archaeology (Belize) for the following activities, the final and ongoing results of which are reported in this volume:

Operations 5 & 6: Monumental Core Excavations

We received permission to resume test excavations (horizontal and stratigraphic column) at Str 10 (Op 5) and Str 1/2 (Op 6) to further refine the construction and occupation chronologies for the monumental core. We also conducted a preliminary assessment of architectural styles and techniques to better understand cultural choices in construction and design and determine how best to tackle future large-scale excavations on earthen-core monumental construction at Alabama (see Chapter 2, this volume).

In the end, excavations clarified several questions about the construction history generated from our 2018 field activities. We also identified several likely targets for future clarification of unresolved relationships. Tantalizingly, our 2019 excavations established that the monumental core of Alabama underwent a more complex developmental history than had hitherto been suspected. This includes Early-to-Late Classic construction that does not conform to later site orientation/layout and highlights the importance of plaza-level and off-axis excavations. Excavations also yielded data relevant to our ongoing discussion of architectural ideals and choice.

Operation 7: Foothills Investigations

During the SCRAP 2015 Phase I reconnaissance, Mr. H. Chiac Sr. led survey team members onto Crown Land in the southwestern foothills of the Alabama area. He showed us what he believed to be a human-made granite feature (L006), possibly related to granite resource extraction or agricultural activity. In 2018, SCRAP geologist Dr. Joanna Potter revisited this locale to sample and classify the local granite.

We received permission in 2019 to conduct test excavations at this locale to determine its age and function. We also hoped to decide if future investigations were warranted based on related research questions surrounding the subsistence practices of ancient Alabamans and expressed local interest (Op 7; see Chapter 5, this volume). In the end, evaluations of the feature's origins and purpose(s) proved inconclusive. We offer several alternative interpretations, and recommendations for the broader study of land use and modification are presented.

Operation 8: Soils, Pottery & Construction Materials Investigations

The associated drainages and lower foothills of the Maya Mountains are the sources of granite construction material and sediments (clays, sands, etc.) used for construction core and local pottery manufacture. Potters worldwide procure clay and rock resources near their homes, generally within a 5 km radius. Previous research indicates that pottery produced locally at Alabama contains an abundance of granitic sand and/or crushed rock fragments; however, petrographic analysis of clay samples collected from around the site in 2015 are inconsistent with data collected on the pottery.

Most archaeological studies employ a random sampling strategy; however, the size, sorting, and composition of rock and mineral inclusions in a soil vary laterally and vertically. Variation is dictated by the depositional environment and underlying parent material. Furthermore, additional sediment and soil formation has occurred since the ancient Maya occupied the landscape, making it challenging to identify resource procurement locations.

In 2019, we received permission to conduct soil stratigraphy analysis in locations where we do not expect to encounter archaeological materials (Op 8; see Chapter 6, this volume). When possible, analysis focussed on exposed soils (e.g., riverbanks or road cuts). Otherwise, small units were strategically placed in different locations to assess soil variability around the Alabama site (e.g., floodplain deposits vs. soils that form on granitic alluvial parent material). This operation expanded our ongoing studies of local pottery manufacture and construction material procurement and provided important preliminary information for upcoming studies of ancient agricultural practices at Alabama.

Operations 9 & 10: Settlement Testing & Excavations

During the 2016 and 2018 field seasons, SCRAP conducted test excavations at several settlement sites in the Alabama settlement zones (Phase II Testing). These operations targeted a representative sample of mounds and mound groups of variable size and configuration, classified using a modified version of the Xunantunich Settlement Survey Classification system (Ashmore et al. 1994). The data generated by this testing program, and associated Phase I surface collecting, has allowed us to refine our understanding of Alabama's settlement chronology and gain a preliminary understanding of resident populations and their associated activities.

The 2019 investigations in the settlement zone continued Phase II testing. We received permission to conduct preliminary vertical and horizontal excavations at the mounds of ALA-002 (Op 9): a Type VI settlement site in Alabama's Block C2 settlement zone (see Chapter 3, this volume). This operation was designed to complement an additional testing program at this locality (Op 10; see Chapter 4, this volume), which included a grid shovel test pitting program that targeted non-mound space. Together, the operations promote a "whole houselot" methodology for investigations (Hutson et al. 2007).

Operations 9 and 10 at ALA-002 contribute to SCRAP goals of outlining a comprehensive biography for Alabama and providing diachronic analyses of material assemblages through a lens of economic integration and comparison with centres situated in adjacent coastal, mountain, and valley zones. The operations continue the ongoing assessment of architectural conditions in the Alabama settlement, the collection of debris to date construction/occupation of settlement sites, characterize the activities and identities of resident populations, and investigate the use of non-mounded space within houselot contexts through the collection of multi-faceted data including information on architecture, macro-artifacts, micro-artifacts, and soil/sediment samples.

Our preliminary investigations at this settlement site have revealed a complex construction and occupation history while raising several more questions about the group's myriad activities and function and its relationship to broader sociopolitical and economic institutions within Alabama and beyond.

Mr. Constancio Teul's Farm

During our field season, Mr. C. Teul--then Alcalde of Maya Mopan Village--invited us to his farm north of the Greene Groves orchard to document mounds he had recently cleared for milpa farming. The farm sits directly along the route to Pearce Ruins at the start of 'gorge'/'gap' (~8-hour walk), located off Block D about 1 km north of the Alabama monumental core. The associated ancient settlement site was labelled ALA-129 and is a Type VI site consisting of two mounds, ALA-129A (over 2 m tall; GPS Pt 318; Figure 1.4) and ALA-129B (< 50 cm tall; GPS Pt 319). A third mound is likely also part of the group, though it would be further in the bush and has yet to be cleared. Both mounds consist of earthen platforms with granite block facings. Another mound (ALA-130) was located along the path to the farm (GPS 320).

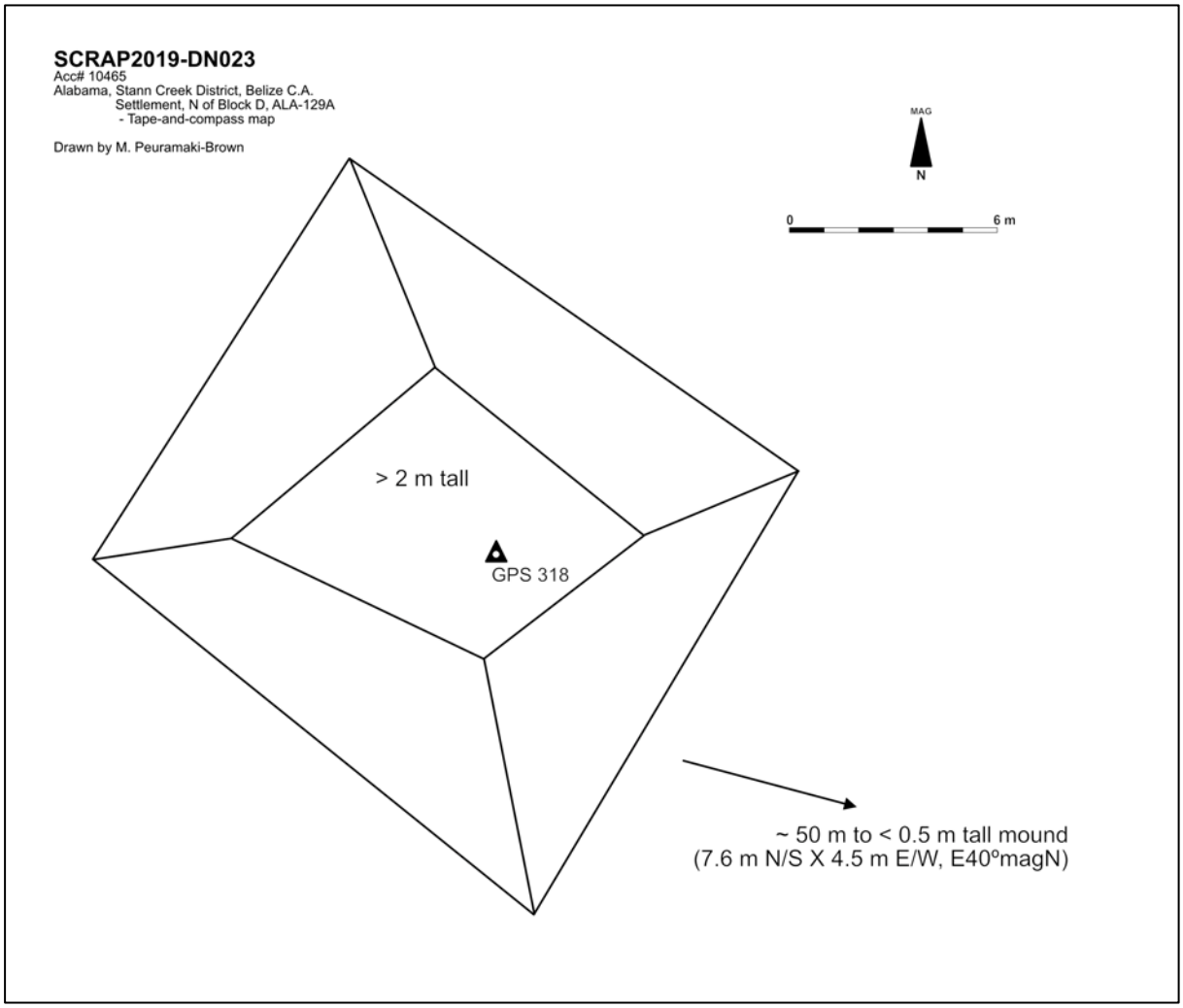

Figure 1.4: Mound ALA-129A, north of Block D.

Lidar Survey

The regional aspirations of SCRAP were further expressed during the 2019 season when we were permitted to contract a Lidar survey centred on the site of Pearce in the Cockscomb (Peuramaki-Brown and Morton 2019a). Due to factors beyond the control of the survey provider, the project remained incomplete at the end of the 2019 season. The remaining data is set to be collected in 2022. We will report more fully on this once complete.

Outreach

Beyond the field, with the blessing of the Institute of Archaeology, the 2019 SCRAP team took part in multiple outreach events, which included

- Engaging presentation & discussion at Maya Mopan Fajina, with IA rep. Josue Ramos.
- Hosting heritage professionals from Belize and Surinam to excavate with our team.
- Giving site and lab tours to visitors, colleagues, and local political representatives.
- Taking part in various cultural events and spiritual ceremonies in both Maya Mopan and Maya Centre.
- Presenting at the Annual Belize Archaeology Symposium.
- Organizing a display booth and experimental archaeology activity at the Succotz Archaeology & Cultural Fair.
- Co-hosting with village Chairman and Alcalde, end-of-season outreach event in Maya Mopan Village, including presentation, film, artifact display, marimba, and snacks.
- Donating school supplies to the Maya Mopan Primary School summer students.
- Sponsoring all team members' participation in a Maya Glyph Workshop in Belmopan.

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Chapter 2. The 2019 Investigations in the Alabama Monumental Core: Operation 5 at Str 10 & Operation 6 at Str 1/ 2

Shawn G. Morton (Northern Arizona University)

Our 2019 field activities within the monumental core of Alabama picked up where our 2018 excavations ended and generally conform to the excavation footprints previously established. The following introductory materials situate our activities within this earlier program and summarize our understanding of the localities at the time that our 2019 research commenced.

Following three seasons of Stann Creek Regional Archaeology Project (SCRAP) reconnaissance and topographic survey in the monumental core (epicentre) of the Alabama site (Peuramaki-Brown et al. 2014; Morton 2015, 2016), the 2018 season represented our first efforts at excavation within the platforms and plazas of the monumental core (Peuramaki-Brown et al. 2018). Excavations in 2018 focused on two areas of the monumental core: Structure 10 (Str 10) and the shared platform of Structures 1 and 2 (Str 1/ 2). At the time, these locations were selected because of:

1. An understanding—albeit tentative in one case—that these two areas had not been previously tested by the 1980s Point Placencia Archaeological Project (PPAP); thus, avoiding any possible repetition of data collection.

2. A working hypothesis that these structures possibly represent examples of both earlier (Str 1/ 2) and later (Str 10) construction phases within the monumental core, based on observations regarding orientation and overall layout (Morton 2016: 25; Peuramaki-Brown and Morton 2019).

As we were unfamiliar with the full nature of the monumental architecture at Alabama (descriptions from 1980s excavations were minimal), we elected to set up large area excavations (8 m x 3 m) at each locus to expose significant portions of the terminal architecture and plaza surface. Smaller excavation windows, or subdivisions, of various size and dimension were excavated within these larger blocks or added to them as necessary to follow up on specific features of interest and to define the nature of internal constructions. All excavations were recorded using the forms, guides, and systems described in Appendix B of this volume, and all matrix was screened using ¼-inch mesh (unless otherwise indicated). Collected artifacts were processed, analyzed, and stored in our field lab at Maya Centre, Belize. With permission, some samples were exported for further analysis in accordance with policy. Summaries of excavation contexts are provided in the following sections, including individual lot data presented in Table 2.1 and bulk artifact counts in Appendix A of this report. Assays of all AMS carbon dates reported were conducted at the A.E. Lalonde AMS laboratory in Ottawa, Canada.

Operation 5: Activities & Findings from 2018 Field Season (Background)

The following discussion of our 2018 excavations is intended as a summary only. For more detailed information on previous work at this location, see Peuramaki-Brown et al. in the 2018 SCRAP field report.

Str 10 is the second tallest structure of the Alabama monumental core (after Str 3) and consists of a large construction platform (approx. 45 m E/ W x 20 m N/ S x 5 m tall), with both range-structure- and pyramid-platform-like features. Str 10 is centrally positioned within the monumental core, located just east of the ball court and to the north of Strs 1 and 2 (Figure 2.1 in this volume). The positioning of Str 10—its northern and southern outset access points descending into the North and East Plazas, respectively—gives it the appearance of having been purposefully constructed to bisect an otherwise conventional (square) plaza space, creating two

separate, elongated plaza areas; we have previously suggested that Str 10 was added as part of a later phase of construction within the Alabama monumental core (Peuramaki-Brown and Morton 2019).

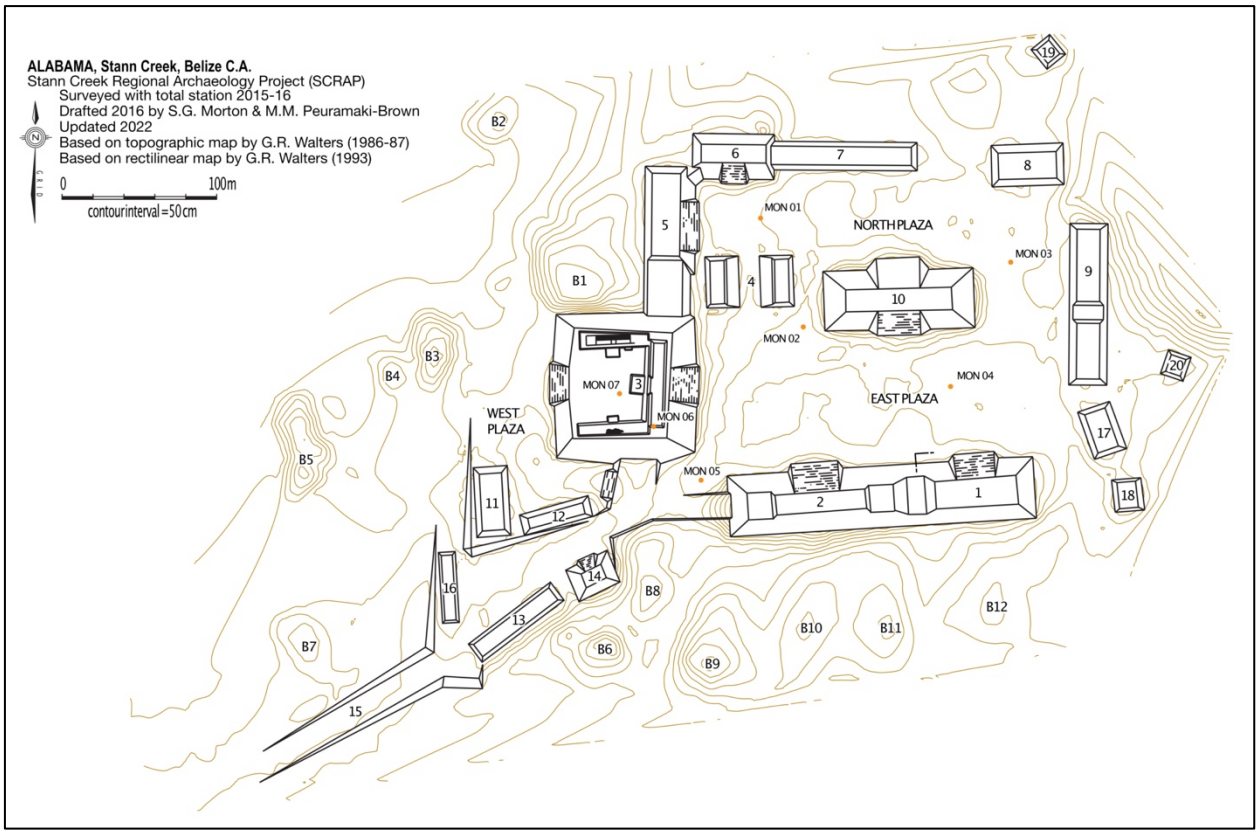

Figure 2.1: Map of Alabama monumental core.

The 2018 excavations at Str 10 were undertaken with the aim of clarifying construction sequence(s) and history of use *vis-à-vis* other constructions in the Alabama monumental core, in particular, Str 1/ 2 located to the south of Str 10 on the southern edge of the East Plaza. Mention of intended future excavations in 1980s reports by the PPAP led to questions regarding past archaeological activity at Str 10—ultimately, unreported by PPAP if they did, in fact, occur (MacKinnon 1988a); therefore, SCRAP 2018 excavations at Str 10 also sought to ascertain whether such activities had previously occurred. The north face of the structure was selected over the south face as a means of avoiding the significant damage caused by bulldozer activity from the 1950s (see comments in Morton 2015) (Figure 2.2).

We were able to define several architectural parameters of the Str 10 construction. The presence of standard architectural daub within excavations suggests the presence of a perishable structure atop the platform at some point in its history; additionally, the presence of 'layered ' (irregular) daub might hint at the presence of clay floors/ surfaces that were resurfaced (washes) at intervals (Littmann 1967). Construction materials (cobbles, granite, and clayey sediments) were likely collected from the nearby Waha Leaf Creek (approx. 150 m east), as well as surrounding foothills and borrow pits (based on profiles in MacKinnon 1988a).

The 2018 excavations also generated a series of new questions that shaped our work in 2019. Primary among these, how was the earthen core of Str 10 contained? What kind of architectural feature is defined by the prominent bulge on the north side of the platform? More generally, the challenges—with respect to preservation/ taphonomy, and interpretation—presented by the presumably effaced earthen core architecture of Str 10, drove questions related

to material choices and localized norms of (and experimentation in) construction. While a typical layer of colluvial material was encountered during excavation—consisting largely of displaced earthen material, cobbles/ pebbles, and some larger granite boulders and ashlars—penetrating excavations into the base of this material failed to reveal *in situ* architectural blocks or other intact evidence for a well-defined stair. While it remains possible that such blocks were present until the relatively recent past—MacKinnon (1988b; MacKinnon et al. 1993) noted that banana company employees removed stones from the east stair of Str 3 for ramp construction and shoring up parts of the airstrip in the 1950s—we must consider the possibility that these were never present at Str 10, and that alternative construction methods or architectural forms were employed (such as unbounded earthen construction and/ or ramps vs. stairs). Observations of the earthen fill of Str 10 also raise the question of whether the rather complex layering of construction core materials (fills) exposed in the Subop 5A profile window was the accumulated product of task units associated with construction (interposed lenses; see Brouwer Burg et al. 2016), represented different construction phases, or perhaps was the result of a construction technique intended to manage issues of stability and drainage (e.g. the layering of cobbles and clays; see Littmann 1967; Sherwood and Kidder 2011). General questions of structure function and construction history/ chronology—stylistic dating of ceramics from 2018 suggested Terminal Classic construction, though we suggested that multiple phases of construction may be in evidence—were also generated, as were those directed at understanding differences in plaza fill/ construction between the North and East Plazas.

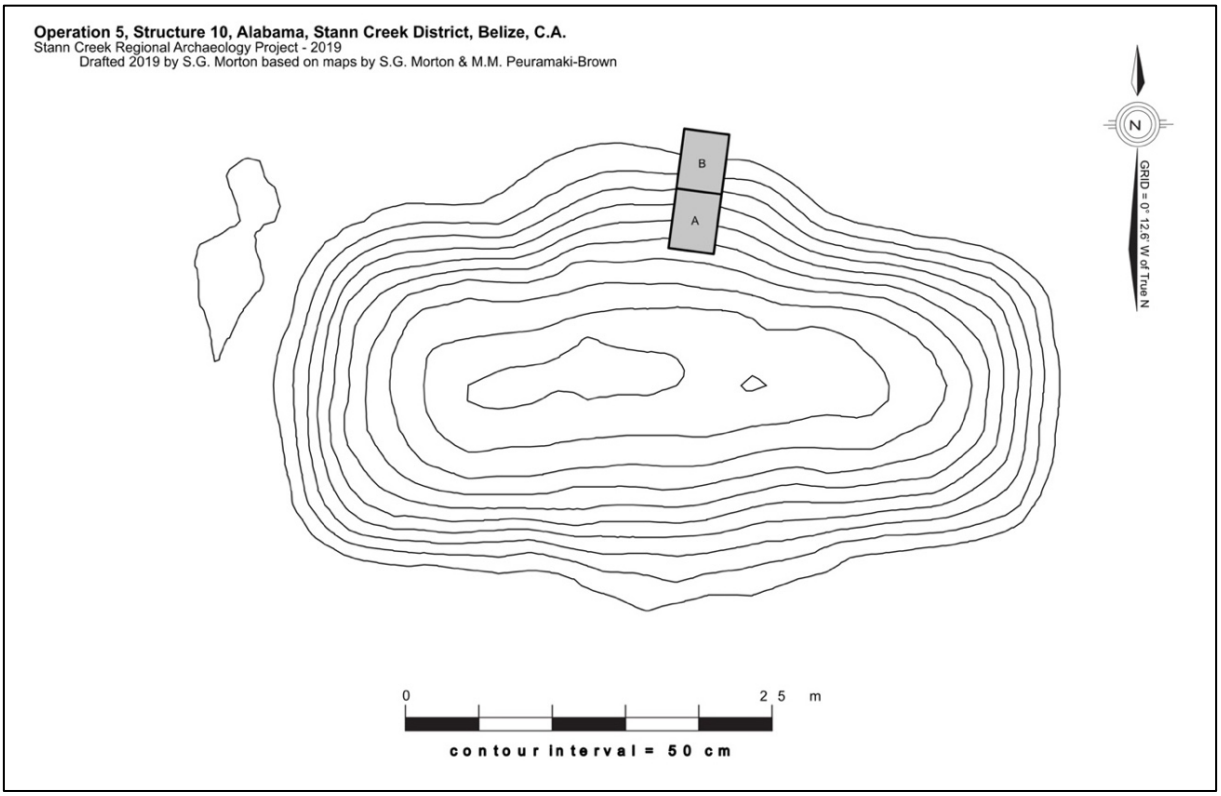

Figure 2.2: Topographic map of Str 10, indicating locations of Op 5, Subops A and B.

Operation 5: Activities & Findings from 2019 Field Season

In 2019, SCRAP team members resumed excavation at Str 10. This included both foreign academic professionals and students, with assistance from community members from the nearby village of Maya Mopan (most of whom had worked with SCRAP for several seasons). Details of these excavations and initial interpretations of the results follow. Context designations are intended to complement/ correlate with those established in 2018 wherever possible. Interpretations are, as always, preliminary, and ongoing laboratory work is likely to result in modifications as we move forward.

Str 10, Operation 5, Suboperations 5A & 5B

The 2019 excavations at Operation 5, Str 10, occurred entirely within the 8 m N/ S x 3 m E/ W footprint established in 2018 (Figures 2.3, 2.4, 2.5, 2.6, and Table 2.1). The excavations and documentation reported here were directed and supervised by Shawn G. Morton (SGM) and assisted by Mr. Idelfonso Cal (IC), Mr. Juan Paquiul (JP), Diego Paquiul (DP), and Mr. Lupercio Salam (LS).

Backfill. A layer of tarps had been placed in the bottom of the excavation footprint prior to backfilling in 2018. As our 2019 excavations occupied the same footprint, a small amount of prep work was required prior to commencement of our activities. In addition to removing the 2018 backfill, vertical and horizontal surfaces were scraped/ cut anew—necessitated by apparent heaving of the clayey matrix and disturbance by probing roots—as Lots 5A-12 and 5B-24; associated matrix was screened, and artifacts collected. While collected materials are out of context, and hence, of limited interpretive value, they include a small number of lithics (n=1), diagnostic (n=1) and non-diagnostic (n=16) ceramic sherds, and daub (n=1). Associated excavation photos include SGM Camera 124-3932 and 124-3942.

Fall/ Colluvium. As our 2019 excavation lay within the 2018 footprint, architectural fall/ colluvium was restricted to those areas where minimal excavation had previously occurred. Specifically, a 1 m x 1 m excavation along the centerline off the northern margin of Subop 5A (Lot 5A-14) and a 1.75 m N/ S x 0.5 m E/ W excavation toward the SW corner of Subop 5B (Lot 5B-31). Both excavations were on structure—equivalent to 2018 excavation Lots 5A-2, 5A-3, 5B-2 and 5B-4—and both were excavated as necessary preludes to the continued excavation of an exploratory trench. The yellowish-brown clay/ clay-loam matrix is consistent with descriptions from 2018—though colour designations trend more toward brown in 2019, perhaps due to contamination/ exposure to backfill materials—with pebble/ cobble content becoming more prevalent further down the slope of the platform. Note that cobble distribution in both lots is discontinuous and inconsistent with expectations for an intact surface. Excavation in the upslope excavation (5A-14) was terminated as cobble density abruptly decreased within an otherwise similar matrix (5A-15; construction core [Str 10 platform]). Lot 5B-31, on the other hand, terminated with the exposure of a consistent cobble surface and distinct transition to a sandy-clay that has been interpreted as a possible sloped architectural surface (Lot 5B-33; habitation debris/ floor cap [Str 10 platform], discussed below). If a similar surface remained to be identified at the base of 5A-14, it was unfortunately missed during excavation and is poorly defined in profile. Such a scenario is perhaps not surprising given the lot's shallow depth below surface and clear disturbance by roots. Associated excavation photos include SGM Camera 146-4271; 137-4305; 126-3976; and 127-3988.

Bulk ceramics (diagnostic, including a possible fragment of a bowl [n=1] and non-

diagnostic [n=9]), lithic chippedstone debris (n=5; including chert [1 tertiary: finishing], quartz [1 primary; and 1 blocky/ fragment/ shatter], quartzite [1 tertiary: unknown], and a blocky/ fragment of unidentified carbonate) were recovered from this context. No small finds were recovered. While no radiocarbon samples were analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Fall/ Habitation Debris 1 (Str 10 Platform). Lots 5A-13 (2 m N/ S x 1 m E/ W in the SE corner of Subop 5A) and 5B-26 (1.7 m N/ S x 1 m E/ W along the eastern margin of Subop 5B) were designated as Fall/ Habitation Debris 1. In both locations in 2018, excavations had terminated with removal of the humic layer and clearly mixed matrices interpreted as architectural fall, and approximate exposure of a discontinuous cobble surface thought to represent a sloped surface on Str 10. With the entire operation freshly cleaned at the commencement of our 2019 activities, the inconsistency of the surface became more apparent. Further, it was noted that a well-defined and consistent cobble surface was visible in the profile of the N/ S trench excavated in 2018 (equivalent to 2018 Construction Core 1, Lot 5A-4). The material excavated in 2019 as Lots 5A-13 and 5B-26 was removed to define this surface more closely. As clear stratigraphic divisions between architectural fall and any on-surface deposits in the excavated matrix could not be identified either in profile or during excavation, they were assigned a mixed context including architectural fall and trending to possible habitation debris immediately above the defined surface. Note that, should the interpretation of this sloped cobble surface (likely the same as that exposed with the excavation of 5B-31) indeed prove correct, there is no material evidence to suggest that its surface was ever refined with another durable material (clay/ daub, mortar, masonry, etc.). Associated excavation photos include SGM Camera 124-3935, 124-3945, 125-3953, and 126-3966.

The only artifacts recovered from this lot consist of seven ceramic sherds (diagnostic, including a jar form [n=2] and non-diagnostic [n=5]). Two samples of possible carbonate material were collected (10465-OT006 and 10465-OT007). While no radiocarbon samples were analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Habitation Debris 1 (Str 10 Platform). Lot 5B-35 was a thin 2.5 m N/ S x 1.5 E/ W, "L-shaped" excavation located just east of centre along the north margin of Subop 5B. The lot, composed of yellowish-brown sandy-clay was excavated to fully expose a consistent cobble plaza surface initially identified during the 2018 excavations and in preparation for expanding the previously established centre-line trench and penetrating the construction core of the plaza. Excavations terminated with exposure of this surface. The unusual shape of the lot was to accommodate the deep plaza sounding excavated in 2018. As few artifacts were recovered from this lot, it remains possible that the excavated matrix is at least partially backfill that made it through the tarps placed in the base of the unit at the end of the 2018 season, or was material tracked in during the removal of said backfill. Associated excavation photos include SGM Camera 128-4009 and 128-4027.

The only artifacts recovered from this lot consist of two pieces of lithic chippedstone (quartz [1 tertiary: reduction] and quartzite [1 tertiary: unknown]). No datable material was recovered.

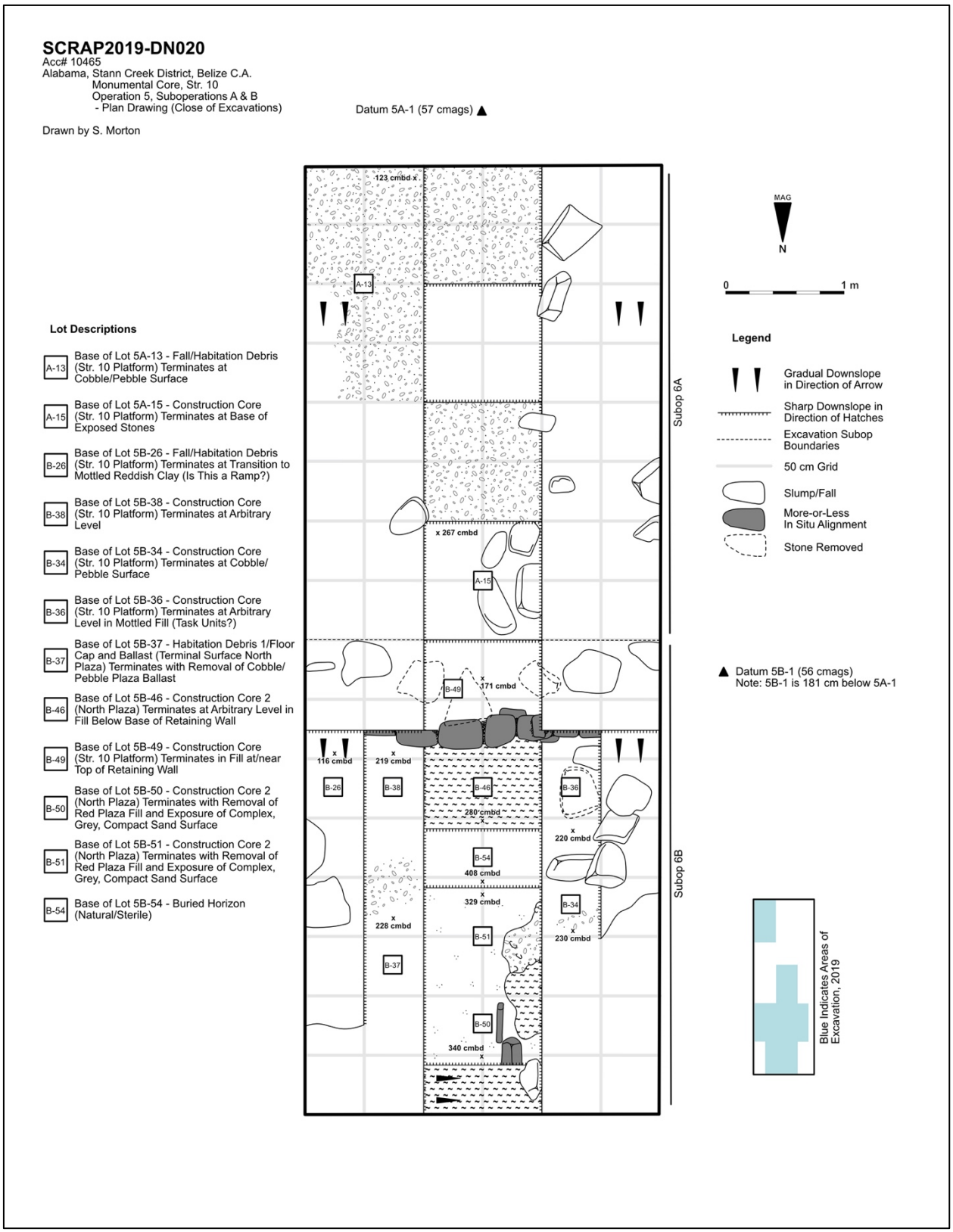

Figure 2.3: Plan drawing of Operation 5 at end of excavation.

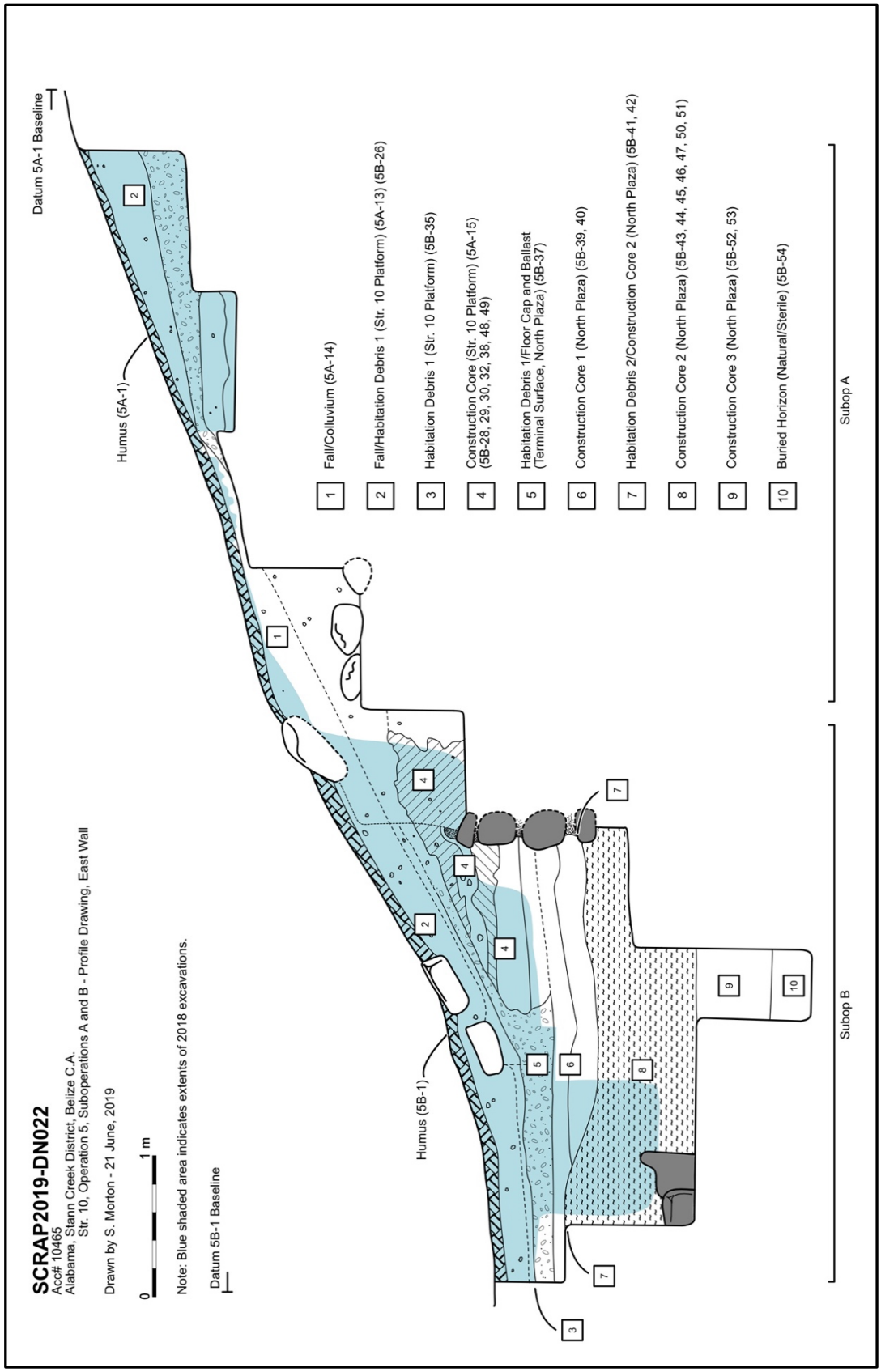

Figure 2.4: Profile drawing of Operation 5 at end of excavation.

Figure 2.5: Vertical photograph of Op 5 at end of excavation (from photogrammetric model).

Figure 2.6: Oblique photograph of Op 5 at end of excavation (facing south).

Habitation Debris/ Floor Cap (Str 10 Platform). Lot 5B-33 was a 2 m N/ S x 0.5 m E/ W excavation located to the west of the Subop's centre-line trench (Figure 2.7). Its vertical limits

were hinted at in profile. The lot was excavated in an effort to separate a layer of yellowish-brown sandy clay with at least 50% cobble/ pebble inclusions interpreted as an intact surface (or the underlying ballast thereof) from the earthen construction core beneath. The uneven nature of this surface makes it possible that some habitation material was inadvertently mixed with the cobbled material. Excavation of the lot was terminated with the removal of this densely cobbled layer and exposure of yellowish-brown loam with few inclusions (Lot 5B-36), below. Associated excavation photos include SGM Camera 127-3988 and 127-3994.

The only artifacts recovered from this lot consist of five ceramic sherds (diagnostic, including a bowl form [n=2] and non-diagnostic [n=3]). While no radiocarbon samples were analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Figure 2.7: Arbitrary thin layer of material recovered from above platform surface (as interpreted from 2018 profile window visible on right side of picture.

Construction Core (Str 10 Platform). Lots 5A-15, 5B-25, 5B-28, 5B-29, 5B-30, 5B-32, 5B-34, 5B-36, 5B-38, 5B-48, and 5B-49 were excavated along the centerline of Subops 5A and 5B above the level of the North Plaza (Figure 2.8). Collectively, they consist of clayey matrices of various colours ranging from yellowish-brown to dark brown and grey. In 2018, each of these differing deposits were designated as unique contexts (Construction Fills 5, 6, and 7 [Str 10 Platform]). Our 2019 excavations reveal the discontinuous nature of these deposits. While they may represent identifiable task units, they are part of a single depositional event and have been consequently re-designated as a singular context. Whether part of a stair, ramp, or some other form, they are firmly and unambiguously within the construction core of the distinctive "bulge" on the north side of Str 10. Associated excavation photos include SGM Camera 137-4305, 138-4339, 124-3942, 124-3948, 125-3960, 126-3973, 126-3980, 127-3985, 127-3991, 127-3994, 128-4022, 128-4030, 129-4124, 129-4128, 129-4134, 135-4258, 135-4261, and 135-4268.

Bulk ceramics (diagnostic, including two fragments of a Hondo bowl/ dish, another bowl fragment, a jar fragment and perhaps part of a pot lid [n=6] and non-diagnostic [n=53]), lithic chippedstone debris (n=9; including quartz [1 tertiary: bifacial reduction], quartzite [1 secondary; 1 tertiary: reduction; and 1 blocky/ fragment/ shatter], phyllite (1 primary), and slate [1 blocky/ fragment/ shatter]), and daub (striated: 6.1 g) were recovered from this context. A portion of a slate celt/ adze was recovered (10465-GS007). A sample of potential carbonate material was also recovered (10465-OT009). While a radiocarbon sample was collected (10465-CB041) it was not analyzed for this context. Chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

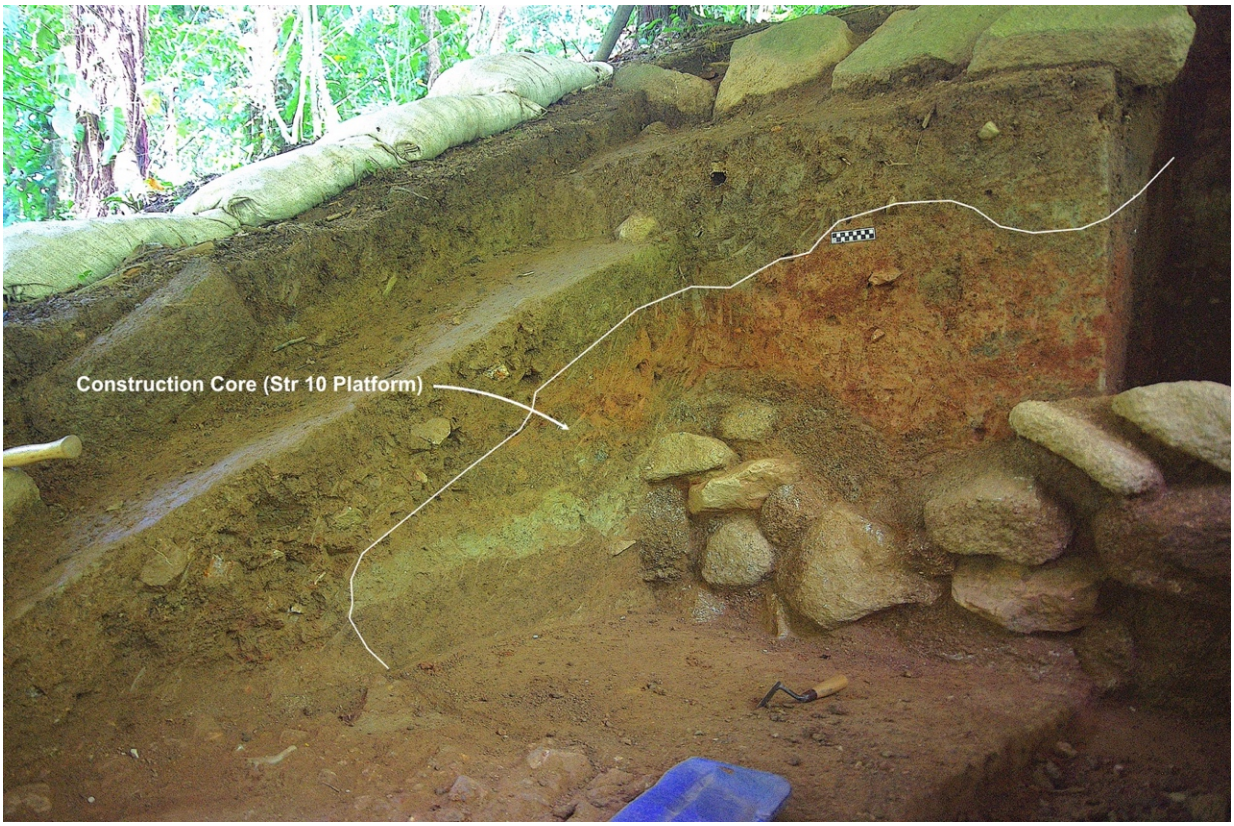

Figure 2.8: Profile image illustrating stratigraphic layering within Str 10. Note the generally horizontal (but discontinuous) layering of different colours (highlighted) below the sloped capping material.

Habitation Debris 1/ Floor Cap and Ballast (Terminal Surface North Plaza). Lot 5B-37 was a 2.5 m N/ S x 1.5 m E/ W "L-shaped" excavation located just east of centre along the north margin of Subop 5B, occupying the same footprint as Lot 5B-35 (Figure 2.9). Excavations were intended to remove the cobble/ pebble ballast (interspersed with yellowish-brown sandy-clay-loam) of the superior terminal surface of the North Plaza. As the surface defined by this material was uneven, it is possible that some habitation debris from the overlying lot was incorporated into this context. Excavations terminated with the exposure of a dark-yellowish-brown sandy loam/ loam with a noticeable absence of cobbles/ pebbles. Associated excavation photos include SGM Camera 128-4033 and 129-4131.

Bulk ceramics (non-diagnostic [n=13]) and lithic chippedstone debris (n=4; including chert [1 blocky/ fragment/ shatter], phyllite [1 primary], quartz [blocky/ fragment/ shatter], and 1 unidentified piece of slate) were recovered from this context. No small finds were recovered. No datable material was recovered.

Figure 2.9: Superior surface of North Plaza as indicated by 2018 profile window (deep pit in photograph).

Construction Core 1 (North Plaza). Lots 5B-39 (1.22 m N/ S x 1 m E/ W) and 5B-40 (2 m N/ S x 1 m E/ W) were composed of dark-yellowish-brown sandy-loam/ loam with few inclusions (Figure 2.10). These lots were excavated along the centreline of Subop 5B, in an effort to better understand the history/ processes associated with the construction of the North Plaza and to clarify the relationship between the base of Str 10 and the plaza. Excavation of these lots terminated somewhat arbitrarily with increased mottling just above a strong red clay layer initially identified in the 2018 deep sounding (Lots 5B-16, 5B-18, 5B-20, and 5B-21). Associated excavation photos include SGM Camera 130-4173, 130-4179, 131-4183, and 131-4182.

Bulk ceramics (non-diagnostic [n=9]), lithic chippedstone debris (n=6; including chert [1 secondary; one tertiary: thinning; and one blocky/ fragment/ shatter], phyllite [1 primary], and quartz [1 primary; and 1 tertiary: unknown]), and daub (regular: 8.8 g) were recovered from this context. No small finds were recovered. No datable material was recovered.

Figure 2.10: Superior surface of Construction Core 1 (North Plaza). Note that it abuts the stones of Alignment 3.

Habitation Debris (Construction Core 2, North Plaza). Lots 5B-41 (1.32 m N/ S x 1 m E/ W) and 5B-42 (2 m N/ S x 1 m E/ W), composed of a thin layer of mottled dark-yellowish-brown sandy-loam/ loam with few inclusions, were excavated along the centre-line of Subop 5B, in an effort to better understand the history/ processes associated with the construction of the North Plaza and to clarify the relationship between the base of Str 10 and the plaza. While designated as a distinct context based on the noted mottling and proximity to the strong red clay layer noted above (2018 Lots 5B-16, 5B-18, 5B-20, and 5B-21), it may well have been deposited as part of the same activity that resulted in Construction Core 1. Its identification as Habitation Debris is dependent on the integrity of the underlying surface and our ability to parse it as a distinct stage of construction. Associated excavation photos include SGM Camera 131-4183, 131-4187, and 131-4193.

A single non-diagnostic ceramic sherd and a single lithic chippedstone tertiary: reduction flake of quartz were the only artifacts recovered from this context. While a sample of carbon was collected (10465-CB050), it was not tested. No stylistically datable material culture was recovered.

Figure 2.11: Red matrix of Construction Core 2 (North Plaza). Note that Alignment 3 rests close to (but not precisely atop) the superior surface of this deposit.

Construction Core 2 (North Plaza). Lots 5B-27, 5B-43, 5B-44, 5B-45, 5B-46, 5B-47, 5B-50, and 5B-51 collectively cover an area of 3.06 m N/ S x 1 m E/ W along the centreline of Subop 5B (Figure 2.11). The matrix consists of a distinctive red clay-loam with few inclusions. A vertical construction of mortared masonry, parts of which were first identified in 2018 as Alignment 3, and which has subsequently proven to stand approximately 1 m high, appears to have been built on the superior surface of this layer, with the lowest stone only slightly embedded. This alignment marks the southern-most margin of our excavations into Construction Core 2 (North Plaza). Excavations in the northern portion of the context area terminated with the exposure of a compact brown sandy-loam layer and exposure of a loosely organized (and utterly perplexing) collection of boulders and cobbles in the NW of the excavation area. Associated excavation photos include SGM Camera 125-3955, 126-3968, 131-4201, 131-4203, 132-4207, 133-4227, 133-4228, 133-4234, 134-4240, 134-4246, 136-4276, 136-4282, and 137-4316.

Bulk ceramics (diagnostic, including two possible sherds of British Honduras Volcanic Ash ware and two sherds from bowl/ jar forms [n=4], and non-diagnostic [n=104]) and lithic chippedstone debris (n=11; including chert [1 secondary; 1 tertiary: unknown; and 1 blocky/ fragment/ shatter], quartz [1 primary; 1 tertiary: reduction; 2 tertiary: unknown; 3 blocky/ fragment/ shatter, and an additional unidentified flake], and slate [1 primary]) were recovered from this context. Small finds consist of two obsidian percussion flakes (Cat. 10465-OB083 and 10465-OB084). A single radiocarbon sample (10465-CB052) was analyzed for this context (Lot

5B-46), returning an initial date of 5556-5467 cal BC. This sample was subsequently re-analyzed, returning a date of 5401-5390 cal BC. In contrast, chronologically diagnostic ceramic sherds exclusively conform to expectations for the Late-to-Terminal Classic period. While the implications of this discrepancy will be discussed more fully below, it is worth noting that the organic material analyzed was recovered from earthen core material and may have been present (naturally?) in this material when it was introduced as fill to the North Plaza. Thus, it is not believed that the recovered dates have any interpretive value with respect to the construction or occupation of Alabama.

Figure 2.12: Superior surface of Construction Core 3 (North Plaza). Note Feature 2B in bottom-right corner of the excavation. Flash photography altered the colours of the photo.

Construction Core 3 (North Plaza). Lots 5B-52 (0.5 m N/ S x 1 m E/ W) and 5B-53 (0.5 m N/ S x 1 m E/ W), one directly below the other near the centre of our trench in Subop 5B, were excavated to identify an occupation horizon and sterile level under the North Plaza (Figure 2.12). The excavated matrix consisted of a brown compact sandy loam with minimal inclusions. While the exposed area was minimal, the presence of cultural materials clearly indicates that it is a constructed context. In the absence of alternative structural details, it is interpreted as a fill layer. While confirmation will have to await further excavation, it appears that the collection of stones first noted in 2018 is part of a larger feature (Feature 2B), that rests on the superior surface of Construction Core 3 (North Plaza). Associated excavation photos include SGM Camera 137-4322, 138-4328, and 138-4336.

Only 7 non-diagnostic ceramic sherds, and two lithic chippedstone fragments (chert [1 tertiary: thinning] and quartz [tertiary: shaping]) were recovered from this context. No datable material was recovered.

Buried Horizon (Natural/ Sterile). Lot 5B-54 is a 0.5 m N/ S x 1 m E/ W excavation into yellowish-brown sand (with no inclusions), below Construction Core 3 (North Plaza) (Figure 2.13). Despite penetrating 28 cm, no cultural materials were recovered, and excavation was arbitrarily halted. Associated excavation photos include SGM Camera 138-4336. No artifacts or datable material was recovered from this context.

Figure 2.13: Occupation horizon. Top of sterile context.

Operation 5: Summary & Interpretations

As noted above, our primary goals directing excavation at Str 10 and the North Plaza for the 2019 field season, in addition to establishing general parameters of construction history and chronology, were aimed at defining the nature of their form and construction, hence:

1. Is the bulge evident on the north side of Str 10 a stair or a ramp?
2. How was the earthen core of Str 10 contained?
3. What materials were chosen for both plaza and platform construction and from where were they obtained?
4. How were these materials used to create a functional architectural space for the inhabitants of Alabama more than 1000 years ago, and what are their long-term taphonomic consequences?

Our interpretations of construction history and associated chronology generally accord with our 2018 results. Our deepest excavations at the locality penetrated a sterile (presumably natural) layer. As no buried O or A horizon was identified, it seems likely that the area had been prepped (stripped to subsoil) prior to construction. Construction Core 3 (North Plaza) was introduced directly atop this layer. Unfortunately, no datable material was recovered from

Construction Core 3 (North Plaza). Nonetheless, there is reason to think that it was never intended to serve as an exposed habitation surface and was rather a distinct stage in a protracted construction program. Feature 2B, the upper surfaces of which were identified in 2018, was more fully exposed in 2019, and was clearly constructed directly atop the superior surface of Construction Core 3 (North Plaza). Its ultimate extents, form, and function remain unknown, with current exposure only revealing two stones (Figure 2.12). Given the delicate nature of the arrangement, with one of the stones—measuring approximately 30 cm long X 20 cm high X 5 cm thick—balanced precariously on its narrow edge, and the lack of an obvious well-developed habitation surface, neither Construction Core 3 (North Plaza) nor Feature 2B were exposed for long. The shockingly red Construction Core 2 (North Plaza) was deposited directly atop. Stratigraphic windows cut into Borrow Pits 3 and 6 (see Chapter 6, this report) at the end of July confirm that this red material naturally underlays portions of the site (Figure 2.14); however, the inclusion of cultural material in both Construction Core 2 (North Plaza) and in the underlying Construction Core 3 (North Plaza) unambiguously identify the matrix identified at Operation 5 as anthropogenic. It seems possible that the excavation of the borrow pits was conducted, at least in part, to acquire this material. While cultural materials were recovered from a thin layer near the superior surface of Construction Core 3 (Habitation Debris 2/ Construction Core 2 [North Plaza]), its segregation as a separate lot was an acquiescence to caution, rather than observed difference. The irregularity of the superior surface of Construction Core 3 would seem to preclude the possibility that it ever served as a living surface for any significant amount of time.

Figure 2.14: Stratigraphic profile in Borrow Pits 3 (left) and 6 (right).

In 2018, an alignment of cut granite (Alignment 3) was identified up-structure, near the boundary between Subops A and B. Over the course of the 2019 season, this alignment was more fully exposed (Figure 2.15). The structure consists of small cut granite blocks (most measuring ~20 cm x 20 cm x 30 cm, but with others measuring much smaller) consolidated with a mortar made of earth and local crushed granite aggregate that may itself be a by-product of shaping blocks (see Chapter 6, this report). Built just over 1 m high, and extending across the entire excavation unit, parallel to the long axis of Str 10, there is no evidence that it was ever plastered or finished, and no indication that it was intended to be visible in the completed edifice of Str 10. Rather, it seems likely that this was a retaining wall, used to add structure to the otherwise unconsolidated earthen construction material of what seems to be an access ramp on the north side of the Str 10 platform. Built directly atop Construction Core 2, it currently represents our earliest identified evidence for the construction of Str 10. Unfortunately, no dates are attached to this portion of the structure.

Figure 2.15: Alignment 3.

From this point, it appears that the North Plaza and Str 10 were constructed together, with Construction Core 1 (North Plaza) directly overlying Construction Core 2 (North Plaza) and abutting Alignment 3 to provide a level surface. Both were overlain by the Construction Core of the Str 10 platform. In 2018, the distinctive deposits of clayey matrices of various colours—ranging from yellowish-brown to dark brown and grey—were interpreted as possible task units, with little suggestion for intentionality in their content (Figure 2.8). This interpretation remains valid. Additionally, it seems possible that the mixing of matrices of different kind/texture served a structural purpose and their specific contents were anything but unintentional. In their discussion of Mississippian earthen architecture, Sarah Sherwood and Tristram Kidder (2011) defy popular perceptions that portray earthen architecture as "simple". To the contrary, they demonstrate that the scale and structural integrity of Mississippian mounds are a product of the careful and conscientious layering of different and distinctive earthen materials. With little evidence so far recovered for extensive masonry in Str 10 (as either structure or facing), it seems increasingly possible that its finished form may have been that of an earthen mound (a particular challenge in a region with heavy rainfall). Were the builders of Str 10 experimenting with earthen materials?

Consistent with findings from 2018, both the Construction Core 1 of the North Plaza and the Construction Core of Str 10 were ultimately overlain by a discontinuous cobble/ pebble surface (Habitation Debris 1/ Floor Cap and Ballast [Terminal Surface, North Plaza]) which presumably served as the living surface (Habitation Debris 1 [Str 10 Platform]) of the complex. All stylistically datable cultural materials associated with either construction or occupation contexts are associated exclusively and unambiguously with the Late-to-Terminal Classic

period. All overlying layers are consistent with non-anthropogenic post-occupation taphonomic processes.

In the end, through our 2019 excavations, we were able to address many of the questions posed at the end of our 2018 season. First, with no stratigraphic or contextual data to suggest otherwise, it seems clear that the bulge on the north side of Str 10 was a ramp, though Wernecke (2005: 73; citing Maler 1908; Suhler and Friedel 1994; Totten 1926) raises the possibility that the ancient Maya constructed wooden stairs. Considering that the rainy season would likely turn any unsurfaced earthen ramp (particularly where clayey soils are present) into a waterslide that would test the nerve of even the bravest 8-year-old, this may be the most likely scenario. Second, unless thoroughly effaced, it seems likely that the only material placed to "contain" and surface the earthen core of the ramp was a layer of rounded cobbles/ pebbles, likely derived from the nearby Waha Leaf Creek. We, yet, have no data on the Str 10 platform, itself. Third, materials selected for the construction of both plaza and ramp were likely, both, immediately local (e.g., from borrow pits and creek deposits) and made use of the by-products of other construction processes (e.g., mortar). Fourth, whether the North Plaza and Str 10, as identified and understood through our excavations at Operation 6 were primary constructions at that locality during the Late-to-Terminal Classic period, or that preparations for their construction involved the razing and removal of earlier constructions, their coeval and coordinated construction clearly indicates that they were planned and constructed as an integrated architectural complex or "set". Moreover, it seems likely that we can consider the construction of this set within a web of novel and developing architectural practices at Alabama, where builders were experimenting not only with forms and materials, but perhaps with their application (see, for instance, the very different construction techniques employed just over 100 m to the south at Str 1/ 2, Op 6, for contrast). That Str 10 remains, situated prominently within the site core of Alabama, more than 1000 years after its initial abandonment is a testament to the successes of these efforts.

Operation 6: Activities & Findings from 2018 Field Season (Background)

The following discussion of our 2018 excavations is intended as a summary only. For more detailed information on previous work at this location, see Peuramaki-Brown et al. in the 2018 SCRAP field report.

Over the course of our survey within the monumental core in 2015-2016, several unique features of Alabama's layout became apparent; chief among these was the remarkable degree of spatial control imposed on Alabama's public spaces by borrow pits along the south, west, and north margins of the monumental core, and by the construction of long platforms along plaza margins. These mechanisms of control have been important in SCRAP's investigations of site development processes and governance (Peuramaki-Brown and Morton 2019). It appears that the primary points of entrance into the monumental core were via the causeway and between structures off the northeast and southeast corners. During 2016, it was observed that a section of elevated terrain between Borrow Pits 11 and 12 seemed to align with a low section of the approximately +100 m long x 20 m wide construction platform that supports Structures 1 and 2 (Figure 2.1). In addition to recovering structural/ construction data, our 2018 excavations were intended to ascertain whether this locality served as an additional formal entrance to the site.

In the end, our excavations provided relatively sound resolution to the question of access, but raised several others, particularly surrounding the unexpectedly complex construction history of this part of the site. In short, our excavations suggested at least four distinct construction episodes at the locale—one associated with a buried structure, two with the overlying plaza, and one with the Structures 1 and 2 construction platform itself. At the time, the earliest episode, for which we had recovered no datable materials, was only exposed within the confines of a 1 m x

1 m excavation window. It was defined by only two cut granite slabs running perpendicular to the transverse axis of Structures 1 and 2, facing west, and backed by a fill of rounded cobbles and coarse sand. Our excavations terminated with the exposure of the superior surface of these slabs.

Based on limited horizontal exposure, we identified two discrete layers of plaza fill/ ballasts: Construction Fill 1 and Construction Fill 2, defined in turn by larger angular cobbles and smaller rounded cobbles, respectively. We interpreted these as running below the extant facing stones of the Str 1/ 2 platform (an interpretation that we have since revised; see below). Atop this plaza base was constructed—apparently during the Late-Terminal Classic period—a construction platform. Only three alignments of stones were apparent (with some displacement) below an unexpectedly large quantity of architectural tumble. While the height of these stones seemed to preclude the possibility of a stair at this location, it remained unclear whether the north face of the construction platform between the paramount platforms of Structures 1 and 2 originally presented a solid vertical façade (although, this seems unlikely) or a "stepped-perpendicular" style of construction terrace as is seen at sites such as Lubaantun (Houk 2015:108).

Additional resolution on the ancient form of this building came by paying attention to one of the most innocuous of artifacts: daub. Despite the prevalence of granite, generally interpreted as architectural tumble, it seems clear from the ubiquitous presence of daub that the superstructures supported upon this construction platform were made of perishable materials, likely including wattle-and-daub walls (suggested by stick marks in the daub) and thatch roofing. This wasn't precisely unexpected; some of the largest civic-ceremonial centres in the Maya area included perishable structures within their monumental core and certainly it would be expected that structures at a relatively small site like Alabama would be so constructed. What was more interesting was the presence of large quantities of clearly parallel-striated, often thick, fragments of daub with *no* stick impressions. We tentatively suggested that this type of daub may represent horizontal surfacing material at Alabama. Our 2019 excavations at this locality were geared toward better understanding construction choices and clarifying the relationships between components/ phases.

Operation 6: Activities & Findings from 2019 Field Season

In 2019, SCRAP team members resumed excavation at Str 1/ 2. This included both foreign academic professionals and students, with assistance from community members from the nearby village of Maya Mopan (most of whom had worked with SCRAP for several seasons). Details of these excavations and initial interpretations of the results follow. Context designations are intended to complement/ correlate with those established in 2018 wherever possible. Interpretations are, as always, preliminary, and ongoing laboratory work is likely to result in modifications as we move forward.

<u>Str 1/ 2, Operation 6, Suboperations 6A, 6B, 6C & 6D</u>

Our 2018 excavations consisted of three contiguous suboperations (units), oriented 0° (magnetic north) and positioned as close to the primary axis of the targeted low section of the construction platform (north face) as was permitted by vegetation. Suboperation 6A (4 m N/ S x 3 m E/ W) was positioned to the south, with Suboperation 6B (4 m N/ S x 3 m E/ W) to the north with partial placement on the East Plaza surface, and an extension to the west in Suboperation 6C (1 m N/ S x 0.5 m E/ W). Our 2019 activities occurred primarily within this same footprint with minor extensions to expose areas of interest (Figures 2.16, 2.17, 2.18, 2.19, and Table 2.1). A

0.5 m N/ S x 2 m E/ W extension was added to Subop 6B along its northwest margin. Subop 6C was extended a further 1 m to the north and 1 m to the south. Finally, a new "L-shaped" suboperation measuring 1 m N/ S x 3.5 m E/ W (Subop 6D) was added along the southern margin of Subop 6A, with a short 1 m extension along 6A's southeast margin. The excavations and documentation reported here were directed and supervised by Shawn G. Morton (SGM) and assisted by Mr. Idelfonso Cal (IC), Higinio Chiac Jr. (HCJ), Mr. Juan Paquiul (JP), Diego Paquiul (DP), Mr. Lupercio Salam (LS), Damacio Sho (DS), Aaron Tush (AT), Erin Niki Phillips (NP), and Gillian Taylor (GT).

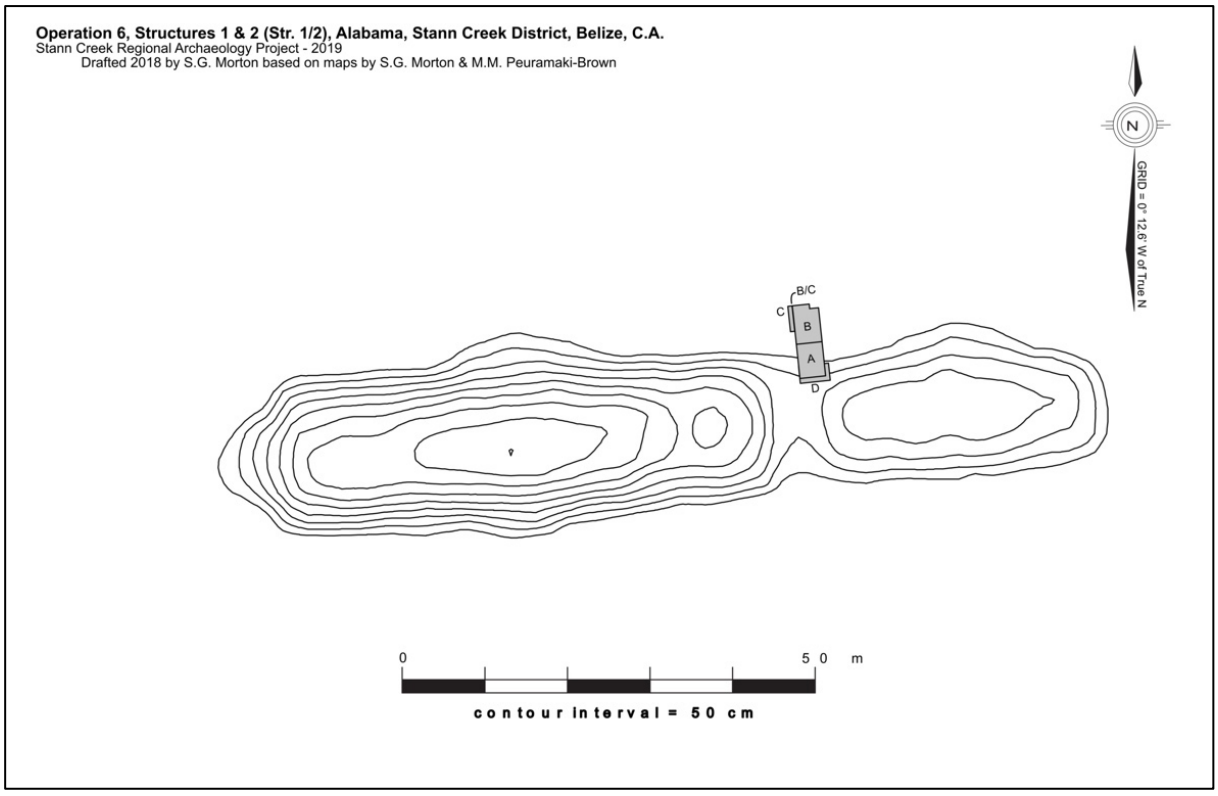

Figure 2.16: Topographic map of Str 1/ 2, indicating locations of Op 6, Subops A, B, C, and D.

Humus. Lots 6B-30 (0.5 m N/ S x 1 m E/ W along the northern margin of Subop 6B), 6C-4 and 6C-8 (0.5 m N/ S and 1 m N/ S, respectively, x 0.5 m E/ W, expanding Subop 6C to north and south), 6B/ C-1 (0.5 m N/ S x 1.5 m E/ W) on the northern margin of Subops B and C), and 6D-1 and 2 (together covering the entirety of the subop) were designated as humus. This context is composed of a dark-yellowish-brown sandy loam to sandy clay loam with a thick root mat. The lots were excavated to expose potential cultural levels below expansions to the 2018 footprint. Excavations generally terminated with removal of the root mat and exposure of colluvium/ fall. Associated excavation photos include SGM Camera 103-1884, 103-1893, 104-1908, 106-2237, 110-2330, and 114-2971.

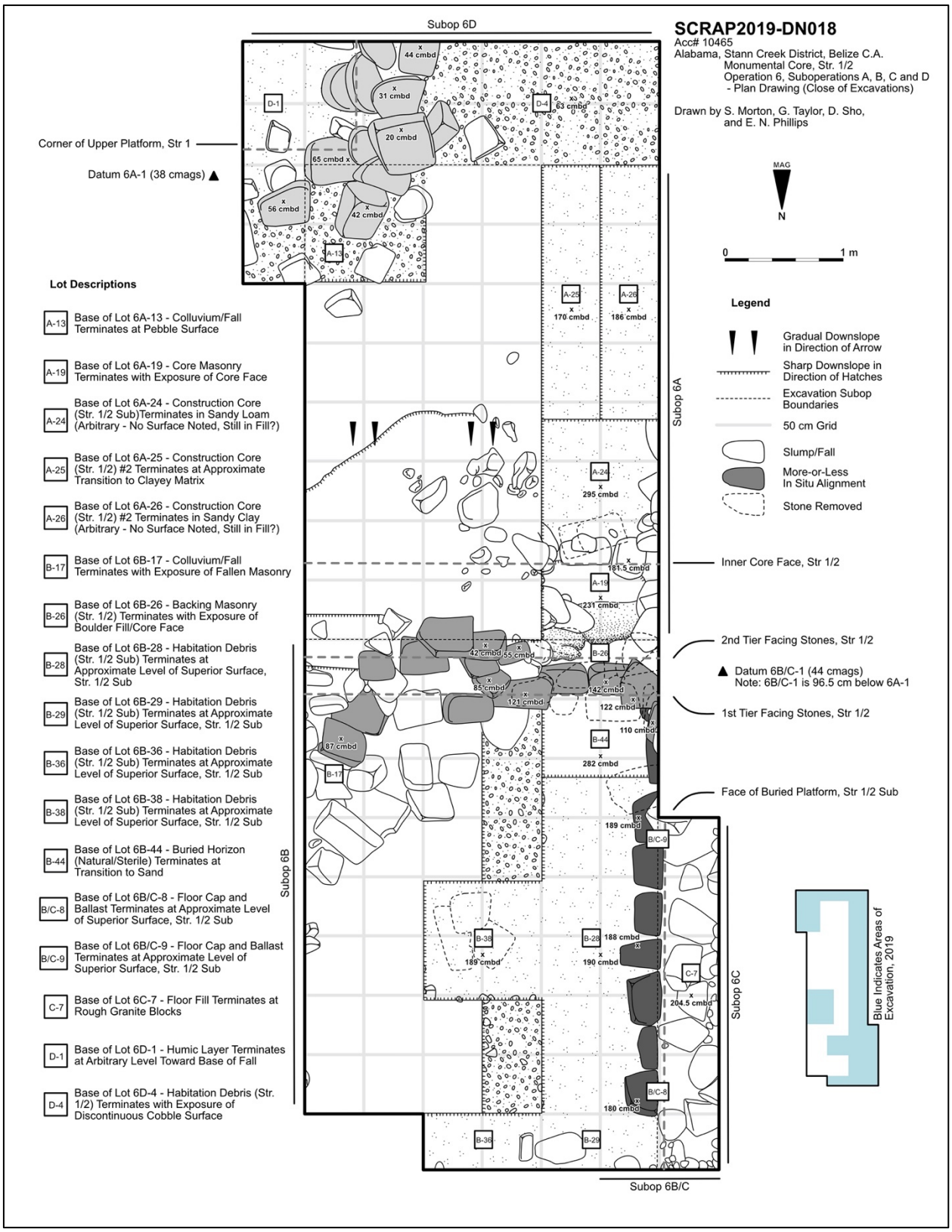

Figure 2.17: Plan drawing of Operation 6 at end of excavation.

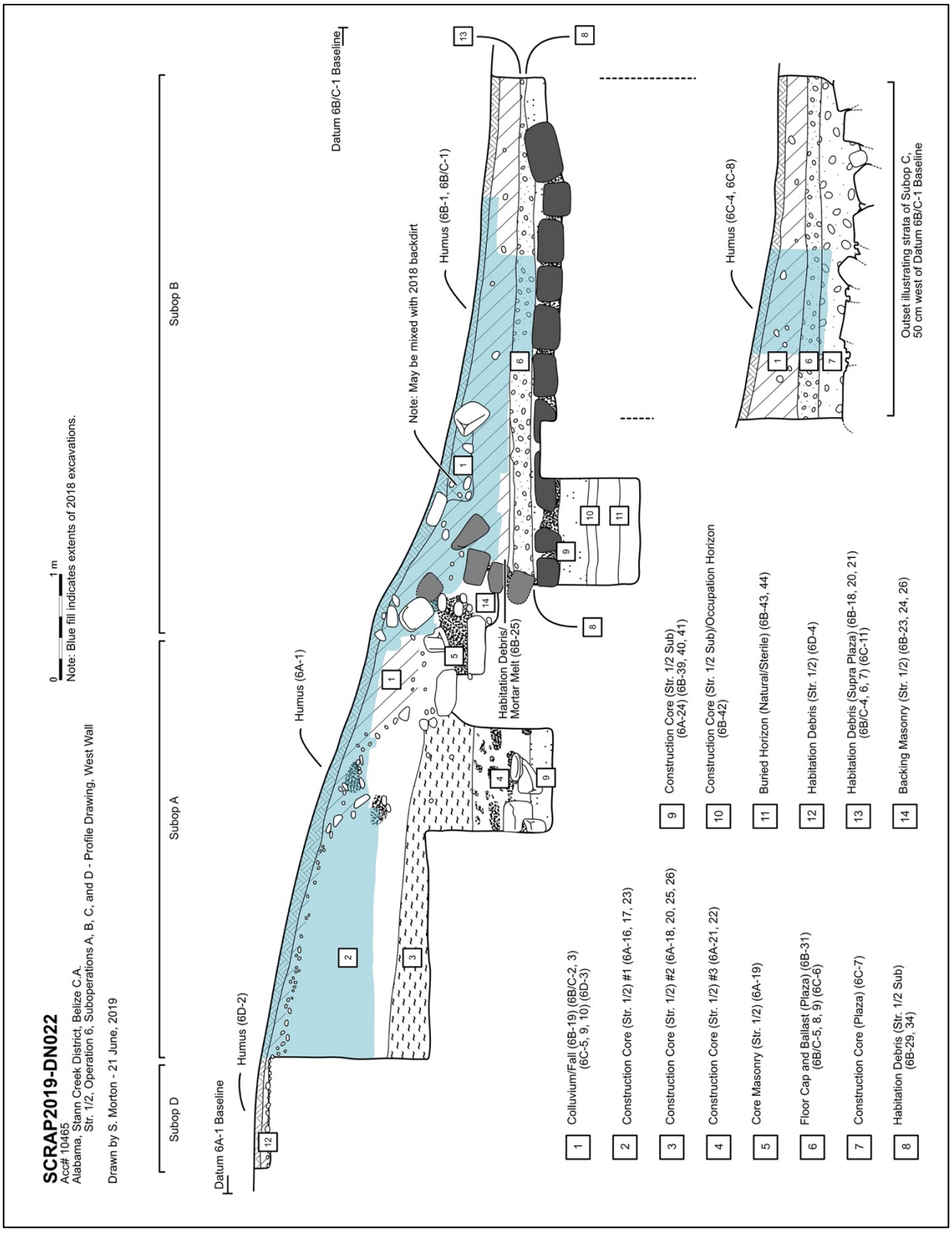

Figure 2.18: Profile drawing of Operation 6 at end of excavation.

Figure 2.19: Oblique photograph of Op 6 at end of excavation (facing south).

Bulk ceramics (diagnostic, including the rim of a Puluacax Unslipped bowl [n=1], the rim of an untyped dish [n=1], and non-diagnostic [n=24]), and lithic chippedstone debris (n=2; including chert [1 tertiary: reduction], and quartz [1 tertiary: bifacial reduction]) were recovered from this context. As in 2018, daub was also recovered, of both regular (n=3) and layered (n=7) types. While no radiocarbon samples were analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Colluvium/ Fall: As our 2019 excavation lay mostly within the 2018 footprint, architectural fall/ colluvium was restricted to those areas where minimal excavation had previously occurred or where we were opening new subops. Specifically, a 1 m x 1 m excavation in the southeast corner of Subop 6A (Lot 6A-13), a 2 m N/ S x 1 m E/ W excavation in the southeast corner (Lot 6B-17), a 1.5 m N/ S x 1 m E/ W excavation in the northwest corner (Lot 6B-19), and a 0.5 N/ S x 1 m E/ W excavation immediately to its east (Lot 6B-32) in Subop 6B, the expansions to Subop 6C (Lots 6C-5, 6C-9, and 6C-10), a 0.5 m N/ S x 1.5 m E/ W excavation along the northwest margin of Subops B and C (Lots 6B/ C-2 and 6B/ C-3) and a 1m N/ S x 2 m E/ W excavation (Lot 6D-3) in Subop 6D, immediately adjacent to the southwest margin of Subop 6A. This context varies in thickness, with thicker deposits encountered below the vertical platform face, and generally composed of large blocks of rough and shaped granite in dark-yellowish-brown to brown silty clay loams blending to sandy loams with irregular inclusions of pebbles, cobbles, and organic material. The lots were excavated to expose intact contexts and terminated as excavators approached plaza surfaces and structural features identified in 2018. Associated excavation photos include SGM Camera 103-1878, 103-1880, 103-1886, 104-1913, 104-1915, 104-1919, 107-2244, 111-2339, 111-2343, and 114-2918.

Bulk ceramics (diagnostic, including the foot of an untyped vessel [n=1], the rim of an untyped bowl [n=1], and non-diagnostic [n=101]), and lithic chippedstone debris (n=18; including chert [1 blocky fragment/ shatter, 1 tertiary: shaping flake, 1 tertiary: bifacial reduction

flake], sandstone [1 blocky fragment/ shatter], quartzite [1 primary flake], and quartz [1 primary flake, 1 tertiary: shaping flake, 1 tertiary: thinning flake, 3 tertiary: unknown flakes, 1 unknown flake, and 3 blocky fragments/ shatter]), and a chert retouched flake tool were recovered from this context. Recovered obsidian includes the proximal fragment of a single obsidian blade (10465-OB026). Daub was also recovered, of both regular (n=20) and layered (n=93) types. While a single radiocarbon sample was recovered (10465-CB005), it was not analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Figure 2.20: Possible habitation debris on the terminal surface of the East Plaza.

Habitation Debris (Terminal Surface East Plaza). Guided by penetrating excavations from 2018, a thin layer of potential habitation debris associated with the terminal surface of the East Plaza was collected from several excavations in Subops 6B, 6C, and 6B/ C (Figure 2.20). Collectively, these cover most of the northern and western portions of Subop 6B and the expansions of Subops 6B and 6C (Lots 6B-18, 6B-20, 6B-21, 6B-22, 6B-25, 6B-33, 6C-11, 6B/ C-4, 6B/ C-6, and 6B/ C-7). This context is composed of dark-yellowish-brown to brown and yellowish-brown sandy loams with pockets of clay and silty clay and less than 40 % pebbles and cobbles. It is questionable whether we managed to isolate a discrete habitation level as no obvious on-surface

deposits were identified. Excavations terminated with exposure of the superior surface of cobble ballast of the East Plaza; in some areas, a finished white clay surface was still intact. Associated excavation photos include SGM Camera 103-1888, 103-1895, 104-1917, 104-1932, 104-1934, 106-2180, 106-2228, 109-2296, 111-2346, and 114-2985.

Bulk ceramics (diagnostic, including the base of a British Honduras Volcanic Ash vessel [n=4], a body sherd from a Fine Orange vessel (n=1), the rims of untyped jars, a bowl, and a dish [n=9], and non-diagnostic [n=120]), and lithic chippedstone debris (n=17; including chert [1 tertiary: unknown flake], and quartz [1 primary flake and 11 blocky fragments/ shatter], and material [1 type]) were recovered from this context. Recovered obsidian includes proximal, distal, and medial fragments of obsidian blades (n=3; 10465-OB001, 10465-OB031, and 10465-OB021). Daub was also recovered, of both regular (n=17) and layered (n=54) types. A single fragment of a slate mano was recovered (10465-GS012). A single floatation sample was collected (10465-LF002). While no radiocarbon samples were analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Floor Cap and Ballast (Terminal Surface East Plaza). Lots (6B-27, 6B-31, 6B-35, 6B-37, 6C-6, 6B/ C-5, 6B/ C-8, and 6B/ C-9) designated as Floor Cap and Ballast (Terminal Surface East Plaza) cover the same footprint as Habitation Debris (Terminal Surface East Plaza). This context is composed of 90 % rounded cobbles in yellowish-brown sandy clay loam (Figure 2.21). Our intention in excavating these lots was to isolate and remove materials associated with discrete construction episodes in the East Plaza. Excavations terminated with removal of cobble layer just above the superior surface of the buried structure (Str 1/ 2 Sub) identified in 2018. Associated excavation photos include SGM Camera 103-1897, 106-2235, 110-2320, 112-2365, 112-2373, 114-2977, 114-2990, and 115-3048.

Bulk ceramics (diagnostic, including the rims of British Honduras Volcanic Ash bowls [n=2], the rim and body sherds of Hondo jars [n=10], the rims, bases, and foot of untyped vessels [n=7], and non-diagnostic [n=110]), and lithic chippedstone debris (n=14; including chert [1 tertiary: reduction flake], quartzite [1 secondary flake and 2 blocky fragments/ shatter], and quartz [2 primary flakes, 2 tertiary: shaping flakes, 1 tertiary: thinning flake, and 3 blocky fragments/ shatter]) were recovered from this context. Two figurine/ censer fragments were recovered (10465-CR001 and 10465-CR002). Recovered obsidian consists of the proximal, medial, and lateral fragments of obsidian blades (n=3; 10465-OB016, 10465-OB017, and 10465-OB003). Daub was also recovered, of both regular (n=6) and layered (n=61) types. A single micromorphological sample was recovered (10465-MM010). Two radiocarbon samples were analyzed for this context (10465-CB003 and 10465-CB004), returning dates of 670 – 777 (95.4%) and 662 – 724 (64.5%) cal AD, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Figure 2.21: Terminal surface East Plaza.

Construction Core (East Plaza). Lot 6C-7, covering the entire 3 m N/ S x 0.5 m E/ W surface of Subop 6C were designated as construction core (East Plaza). This context is composed of dark-yellowish-brown clay loam amidst 90 % cobbles and extends below the surface of Str 1/ 2 Sub noted in Subop B (Figure 2.22). Excavations terminated with the exposure of large, disorganized granite blocks. Associated excavation photos include SGM Camera 115-3044.

Bulk ceramics (non-diagnostic [n=6]), and lithic chippedstone debris (n=1; quartz [tertiary: shaping flake]) were recovered from this context. No radiocarbon samples were analyzed for this context, and no chronologically diagnostic artifacts were recovered.

Habitation Debris (Str 1/ 2 Sub Platform). Lots 6B-28, 6B-29, 6B-34, 6B-36, and 6B-38, collectively, were designated as habitation debris associated with the Str 1/ 2 platform and covers an area of approximately 3.65 m N/ S x 2 m E/ W along the western margin of Subop 6B. This context is composed of yellowish-brown to dark-yellowish-brown sandy loams and sandy clay loams with few inclusions. A thin layer, these lots were isolated as potential habitation debris above the superior surface of the buried platform identified in 2018 (Str 1/ 2 Sub). Excavations terminated somewhat arbitrarily at the same height as the facing stones defining the west side of the platform. Associated excavation photos include SGM Camera 110-2337, 112-2373, 114-2988, 114-3018, and 115-3066.

Figure 2.22: Right, Construction core (East Plaza). Note platform of Str 1/ 2 Sub to left of photo.

Bulk ceramics (diagnostic, including the base, foot, and rims of untyped vessels [n=4], and non-diagnostic [n=82]), and lithic chippedstone debris (n=1; quartz tertiary: shaping flake) were recovered from this context. A single modified cobble (perhaps a polisher?) was recovered (10465-OT002). Daub was also recovered, of both regular (n=11) and layered (n=18) types. While a radiocarbon sample was collected (10465-CB006), it was not analyzed for this context. Chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Construction Core (Str 1/ 2 Sub Platform). Lot 6A-24 (a 1 m x 1 m excavation along the eastern margin of Subop 6A), and Lots 6B-39, 6B-40, and 6B-41 (a second 1 m x 1 m excavation in the southwest corner of Subop 6B) were identified as the construction core of the Str 1/ 2 Sub platform (Figure 2.23). This context is composed of yellowish-brown sandy loam. Excavations were conducted with the goal of identifying and removing fill materials associated with the Str 1/ 2 Sub platform. Excavations terminated at approximately the same level as the base of the single course of facing stones defining the platform. Associated excavation photos include SGM Camera 116-3081, 116-3087, 117-3101, and 119-3119.

Bulk ceramics (diagnostic, including three sherds of a local ceramic type, Laguna Verde Incised], and non-diagnostic [n=121]), and lithic chippedstone debris (n=1; chert tertiary: reduction flake) were recovered from this context. Daub was also recovered, of both regular (n=14) and layered (n=2) types. While three radiocarbon samples were recovered (10465-CB028, 10465-CB029, and 10465-CB026), only one was analyzed for this context, producing a date of 527 – 601 (58.8%) cal AD. The Laguna Verde Incised ceramic type has been dated to the Early Classic, in support of this date.

Figure 2.23: Construction core of Str 1/ 2 Sub platform. Note homogeneity of material.

Construction Core (Str 1/ 2 Sub Platform)/ Occupation Horizon. A penetrating (1m x 1m) excavation to the base of the Str 1/ 2 Sub platform was marked by a transition to a brown sandy loam (Lot 6B-42). The transition was unclear during excavation and the 10 cm thick level was collectively designated as Construction Core (Str 1/ 2 Sub Platform)/ Occupation Horizon. This context is composed of brown sandy loam. This was an arbitrary 10 cm level. Associated excavation photos include SGM Camera 118-3105.

Bulk ceramics (non-diagnostic [n=29]), and lithic chippedstone debris (n=3; including chert [1 tertiary: shaping flake], and quartz [1 primary flake and 1 blocky fragment/ shatter]) were recovered from this context. While a radiocarbon sample was collected (10465-CB027), it was not analyzed for this context. No chronologically diagnostic material culture was recovered.

Buried Horizon (Natural/Sterile). Together, Lots 6B-43 and 6B-44, measuring 1m x 1m in the southwest corner of Subop 6B were designated as a natural/sterile buried horizon (Figure 2.24). This context is composed of dark-yellowish-brown to brown sandy loam. Believing we may have been below the occupation horizon at this locality, we dug in two arbitrary layers. Excavations terminated as both proved culturally sterile. Associated excavation photos include SGM Camera

119-3111 and 120-3124.

No material culture was recovered from this context.

Figure 2.24: Occupation horizon. Top of sterile context.

Habitation Debris (Str 1/ 2 Platform). Located along the western edge of Subop 6D, Lot 6D-4 represents possible habitation debris associated with the Str 1/ 2 platform. This context is composed of yellowish-brown sandy clay loam. This represents a thin and somewhat arbitrary level just above a discontinuous cobble surface on top of the Str 1/ 2 platform and terminated with exposure of this surface. Associated excavation photos include SGM Camera 107-2245.

Bulk ceramics (diagnostic, including rim fragments from untyped jars and a bowl [n=3]) were recovered from this context. While no radiocarbon samples were analyzed for this context, chronologically diagnostic ceramic sherds conform to expectations for the Late-to-Terminal Classic period.

Figure 2.25: Disorganized stones, mortar, and earth between facing masonry and core face of the Str 1/ 2 platform.

Backing Masonry (Str 1/ 2 Platform). A series of excavations covering an area of 1.36 m N/ S x 1 m E/ W in the northwest corner of Subop 6A (Lots 6B-23, 6B-24, and 6B-26) represents the backing masonry for the Str 1/ 2 platform (Figure 2.25). This is a highly variable context with cobbles and boulders in a dark-yellowish-brown sandy loam matrix. It was excavated to better understand the construction history of this part of the site and terminated arbitrarily. Associated excavation photos include SGM Camera 107-2254, 109-2296, and 109-2302.

Bulk ceramics (non-diagnostic [n=41]), and lithic chippedstone debris (n=1; quartzite [secondary flake]) were recovered from this context. A single modified cobble was recovered (10465-OT008). Daub was also recovered, of both regular (n=5) and layered (n=134) types. While no radiocarbon samples were analyzed for this context, and no chronologically diagnostic material culture was recovered.

Figure 2.26. Core Masonry of Str 1/ 2 platform. Note that granite boulders are poorly organized and uncut.

Core Masonry (Str 1/ 2 Platform). Lot 6A-19, a 0.6 m N/ S x 1 m E/ W excavation in the northwest corner of Subop 6A, was identified as Core Masonry (Str 1/ 2 Platform). The context consists of 20 % cobbles in a yellowish-brown clay loam matrix and larger stones defining a clear separation between this context and the construction core of the platform (Figure 2.26). Note that this material is poorly organized. It was excavated to better understand the construction history of this part of the site and terminated with exposure of the earthen core. Associated excavation photos include SGM Camera 112-2363.

A single chert tertiary: resharpening flake was recovered from this context as well as a single micromorphological sample (10465-MM011).

Construction Core 1 (Str 1/ 2 Platform). Several distinct construction cores were designated within the Str 1/ 2 platform. Covering a 1 m E/ W strip along the western margin of Subop 6A, Lots 6A-14, 6A-15, 6A-16, 6A-17, and 6A-23 were designated as Construction Core 1 (Str 1/ 2 Platform). This context is composed of yellowish-brown sandy loams and clay loams with irregular cobble and pebble inclusions (Figure 2.27). This is part of a trench excavated to better understand the construction history of the platform. Excavations terminated arbitrarily within the construction core. Associated excavation photos include SGM Camera 104-1906, 104-1923, 110-2326, 110-2332, and 119-3108.

Figure 2.27: Earthen construction core of Str 1/ 2 platform.

Bulk ceramics (diagnostic, including the rim of an untyped vessel [n=1], and non-diagnostic [n=22]), and lithic chippedstone debris (n=7; including chert [1 tertiary: finishing flake and 1 blocky fragment/ shatter], quartz [1 tertiary: thinning flake, 1 tertiary: unknown flake, and 1 blocky fragment/ shatter] and quartzite [1 tertiary: thinning flake and 1 blocky fragment/ shatter]) were recovered from this context. Recovered obsidian consists of a proximal blade fragment (10465-OB002). Daub was also recovered, of both regular (n=8) and layered (n=45) types. While no radiocarbon samples were analyzed for this context, a chronologically diagnostic ceramic sherd conforms to expectations for the Late-to-Terminal Classic period.

Construction Core 2 (Str 1/ 2 Platform). Covering a 1 m E/ W strip along the western margin of Subop 6A, Lots 6A-18, 6A-20, 6A-25, and 6A-26 were designated as Construction Core 2 (Str 1/ 2 Platform). This context is composed of yellowish-brown sandy clays and clay loams with few inclusions. This is part of a trench excavated to better understand the construction history of the platform. Excavations terminated arbitrarily within the construction core. Associated excavation photos include SGM Camera 111-2344, 115-3061, 120-3141, and 120-3153.

Lithic chippedstone debris (n=6; including chert [1 secondary flake and 1 tertiary: reduction flake], and quartz [3 tertiary: reduction flakes, and 1 blocky fragment/ shatter]), as well as a single unidirectional quartz core and a chert retouched flake tool were recovered from this

context. Daub was also recovered, of both regular (n=2) and layered (n=13) types. Neither radiocarbon samples nor chronologically diagnostic material culture was recovered.

Construction Core 3 (Str 1/ 2 Platform). Penetrating the core of the Str 1/ 2 platform just behind the backing masonry, two stacked 1 m x 1 m lots (Lots 6A-21 and 6A-22) were designated as Construction Core 3 (Str 1/ 2 Platform). This context is composed of brownish yellow sandy clay. This is part of a trench excavated to better understand the construction history of the platform. Excavations terminated arbitrarily within the construction core. Associated excavation photos include SGM Camera 116-3085 and 117-3095.

Bulk ceramics (non-diagnostic [n=14]) and layered daub (n=13) were recovered from this context. While a radiocarbon sample was collected (10465-CB025), it was not tested, and no chronologically diagnostic material culture was recovered.

Operation 6: Summary & Interpretations

As noted above, our primary goal directing excavation at Str 1/ 2 and the East Plaza for the 2019 field season, in addition to establishing general parameters of construction history and chronology, was to gain a better understanding of the choices that builders were making in constructing Str 1/ 2 and across the broader site.

For the most part, excavations conducted by SCRAP project members (and of the PPAP before), suggested a simple, often single component construction history for the monumental core of Alabama. Moreover, this history has been exclusively associated with the Late-to-Terminal Classic period. Our excavations in 2018 hinted at additional complexity and our 2019 excavations clarified this sequence at Str 1/ 2.

The earliest evidence for human presence at the locality is represented by the lots designated as Construction Core (Str 1/ 2 Sub). Both radiocarbon and stylistic dating of ceramics push first occupation for this part of the monumental core into the Early-to-Late Classic transition. Delimited by cut granite stones backed and filled with yellowish-brown sandy loam, the full extents and orientation of this structure remain unclear. We may have encountered traces of this material below the Str 1/ 2 platform, in Subop A, though the relative elevation is somewhat different, and no cut stones were encountered. The exposed masonry in Subop B is west-facing and extends approximately 4 m perpendicular to the north face of the shared Str 1/ 2 platform. At present, this platform only stands one course high and there is no reason to believe it ever stood taller.

The Str 1/ 2 platform was built directly atop the superior surface of Str 1/ 2 Sub. At this location along the structure, it seems the cut granite facing stood at least 4 (perhaps 5) courses high. The considerable quantity of granite noted in the Colluvium/ Fall layer may suggest that the face stood sheer another several courses (thus modifying our 2018 interpretation). This facing was backed by a mix of clayey earth and unorganized uncut granite cobbles/ boulders (Backing Masonry [Str 1/ 2]), in-turn backed by semi-organized uncut granite cobbles/ boulders. Both the facing and Core Masonry (Str 1/ 2) were consolidated with a granite and clay mortar. It should be noted that the core masonry of the structure would not likely be identified as such at most Maya sites; however, as the construction core of the Str 1/ 2 platform contains few boulders, a concentration behind the backing masonry, no matter how loose, stands out as an apparent choice on the part of the builders. The main mass of the platform consists of piled earth, as noted, with few stones. While the construction core of Str 1/ 2 was grouped into three different fills during excavation, this reflected an attempt to assert some vertical control and was arbitrary. Construction Cores 1-3 (Str 1/ 2) should be considered a single context. While we have no absolute dates for this construction, relative stylistic dating of ceramics recovered from platform

construction layers are all consistent with expectations for the Late-to-Terminal Classic period. As noted in our 2018 report, the presence of both "regular" and layered daub (particularly in Colluvium/ Fall contexts) are suggestive of perishable structures atop the platform and (perhaps) prepared horizontal surfaces.

The relationship between the Str 1/ 2 platform and the East Plaza is somewhat ambiguous—extending the Subop C excavations south to the Str 1/ 2 platform face would likely clarify this—but it seems likely that the construction of the East Plaza (at least, its terminal form) post-dates that of the Str 1/ 2 platform. This represents a revision of our 2018 interpretation that had the bulk of the Str 1/ 2 platform built atop the terminal plaza surface (clarified by penetrating excavations at the platform facing in 2019). At some point in the locality's past, disorganized granite boulders were placed adjacent and external to the facing of the Str 1/ 2 Sub platform and brought to level with the superior surface of this earlier platform (Construction Core [East Plaza]). Both this fill and Str 1/ 2 Sub were buried beneath the Cap and Ballast of the East Plaza, at the same time abutting, and burying the first course of masonry on the Str 1/ 2 platform. Radiocarbon dates and stylistically diagnostic ceramics recovered from these layers are consistent with the Late-to-Terminal Classic period.

While thin layers were isolated and recovered from atop the superior surfaces of both platforms and plaza to recover materials associated with a possible habitation surface, no definitive evidence for intact on-surface assemblages was identified. It is worth noting that no datable materials were recovered from these contexts that contradict the dates associated with materials recovered from the various construction cores. These layers were overlain with (presumably) post-abandonment decomposition/ fall and soil development.

Recommendations

Both localities (Operations 5 and 6) are worthy of additional field study and present questions relevant to a better understanding of how the ancient inhabitants of Alabama made use of its monumental core—its structures and spaces—and the choices they made in its construction.

Thus far, excavations at Str 10 (Op 5) have focussed on its northern access (ramp or stair) and its relationship to the North Plaza. Future excavations need to penetrate deeper into the body of the Str 10 platform (perhaps at the corner where the access feature, plaza, and main bulk of the platform meet). Feature 2B, its form and purpose, is also worthy of attention and would require expanding plaza-level excavations. Finally, our efforts at Str 10 have focussed on defining construction history over use. Horizontal excavations on the superior surface of the Str 10 platform may serve to shed light on the specific purpose of Str 10 and define the form of the perishable structure assumed to rest upon its summit.

Excavations at Str 1/ 2 (Op 6) were similarly focussed on questions of access and construction history. At the specific locality of Subop 6C, it is recommended that the excavation be extended to the south to define the relationship between the construction core of the East Plaza and the Str 1/ 2 platform. Was the plaza broadly levelled before the construction of the Str 1/ 2 platform, or does the construction core (like the ballast) of the East Plaza about the facing of this structure? Broader horizontal excavations should also focus on expanding the exposure of the buried Str 1/ 2 Sub platform. Currently, this is the earliest direct evidence for construction within the core of Alabama. Its orientation suggests a radically different configuration of this portion of the site compared to the overlying Late-to-Terminal Classic architecture that dominates the visible space of the monumental core today. As at Str 10, our efforts at Str 1/ 2 have focussed on defining construction history over use. Horizontal excavations on the superior surface of the Str 1/ 2 platform may serve to shed light on the specific purpose of Structures 1 and 2 and define the form of the perishable structure assumed to rest upon its summit.

Table 2.1: Excavation lots for Operations 5 and 6

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
5	B	54	Buried Horizon (Natural/Sterile)		0.50	1.00	0.50	0.18	0.09	10YR 5/6 Yellowish Brown	Sand	100% Sand
5	B	39	Construction Core (Plaza) #1		1.22	1.00	1.22	0.23	0.29	10YR 4/4 Dark Yellowish Brown	Sandy Loam/Loam	100% Sandy Loam/Loam
5	B	40	Construction Core (Plaza) #1		2.00	1.00	2.00	0.19	0.38	10YR 4/4 Dark Yellowish Brown	Sandy Loam/Loam	100% Sandy Loam/Loam
5	B	27	Construction Core (Plaza) #2		1.00	0.50	0.50	0.02	0.01	10YR 3/6 Dark Red	Clay	100% Clay
5	B	43	Construction Core (Plaza) #2		1.56	1.00	1.56	0.16	0.25	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	44	Construction Core (Plaza) #2		1.50	1.00	1.50	0.12	0.18	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	45	Construction Core (Plaza) #2		1.50	1.00	1.50	0.12	0.19	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	46	Construction Core (Plaza) #2		1.56	1.00	1.56	0.14	0.22	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	47	Construction Core (Plaza) #2		1.00	0.50	0.50	0.31	0.16	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	50	Construction Core (Plaza) #2		1.00	1.00	1.00	0.29	0.29	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	51	Construction Core (Plaza) #2	LC-TC	1.00	1.00	1.00	0.51	0.51	2.5YR 4/8 Red	Clay Loam	100% Clay Loam
5	B	52	Construction Core (Plaza) #3		0.50	1.00	0.50	0.28	0.14	10YR 4/3 Brown	Sandy Loam	100% Sandy Loam
5	B	53	Construction Core (Plaza) #3		0.50	1.00	0.50	0.34	0.17	10YR 4/3 Brown	Sandy Loam with Patches of Compact Loamy Sand	100% Sandy Loam with Patches of Compact Loamy Sand

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
5	A	15	Construction Core (Str. 10)	LC-TC	1.00	1.00	1.00	0.35	0.35	10YR 5/6 Yellowish Brown	Clay Loam	50% Clay Loam; 30% Cobbles; 20% Boulders
5	B	25	Construction Core (Str. 10)		0.40	0.50	0.20	0.46	0.09	10YR 5/6 Yellowish Brown	Loamy Sand	100% Loamy Sand
5	B	28	Construction Core (Str. 10)		1.20	1.00	1.20	0.19	0.23	2.5YR 4/6 Red (Mottled with Grey)	Silty Clay	70% Silty Clay; 30% Small Cobbles/Pebbles
5	B	29	Construction Core (Str. 10)		1.70	1.00	1.70	0.18	0.31	10YR 5/6 Yellowish Brown with Red, Brown, and Grey	Clay	100% Clay
5	B	30	Construction Core (Str. 10)		1.85	1.00	1.85	0.09	0.16	10YR 4/6 Dark Yellowish Brown	Clay Loam	98% Clay Loam; 2% Pebbles
5	B	32	Construction Core (Str. 10)		2.20	1.00	2.20	0.14	0.30	10YR 4/4 Dark Yellowish Brown	Clay	60% Clay; 40% Cobbles/Pebbles
5	B	34	Construction Core (Str. 10)		1.00	0.50	0.50	0.27	0.14	10YR 5/6 Yellowish Brown	Sandy Clay	50% Sandy Clay; 50% Cobbles/Pebbles
5	B	36	Construction Core (Str. 10)	LC-TC	1.00	0.50	0.50	0.44	0.22	10YR 5/4 Yellowish Brown	Loam	98% Loam; 2% Pebbles
5	B	38	Construction Core (Str. 10)		1.00	1.00	1.00	0.05	0.05	10YR 5/4 Yellowish Brown	Loam	98% Loam; 2% Pebbles
5	B	48	Construction Core (Str. 10)		0.75	0.50	0.38	0.51	0.19	7.5YR 3/4 Dark Brown	Clay Loam	95% Clay Loam; 5% Pebbles/Cobbles
5	B	49	Construction Core (Str. 10)		0.75	0.50	0.38	0.50	0.19	2.5YR 4/6 Red (Mottled)	Silty Clay	70% Silty Clay; 30% Pebbles

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
5	A	14	Fall/Colluvium		1.00	1.00	1.00	0.15	0.15	10YR 5/6 Yellowish Brown	Clay Loam	80% Clay Loam; 15% Pebbles/Cobbles; 5% Roots
5	B	31	Fall/Colluvium	LC-TC	1.75	0.50	0.88	0.17	0.15	10YR 5/4 Yellowish Brown	Clay	60% Clay; 40% Cobbles/Pebbles. Note: Cobbles isolated to northern 1.25 m
5	B	26	Fall/Habitation Debris #1 (Str. 10)	LC-TC	1.70	1.00	1.70	0.12	0.20	7.5YR 3/4 Dark Brown	Clay Loam	95% Clay Loam; 5% Pebbles/Cobbles
5	A	13	Fall/Habitation Debris #1 (Str. 10)		2.00	1.00	2.00	0.15	0.30	5YR 4/6 Yellowish Red	Sandy Clay	100% Sandy Clay
5	B	35	Habitation Debris #1 (Str. 10)		2.50	1.50	3.75	0.03	0.13	10YR 5/6 Yellowish Brown	Sandy Clay	100% Sandy Clay
5	B	33	Habitation Debris #1/Floor Cap (Str. 10)	LC-TC	2.00	0.50	1.00	0.21	0.21	10YR 5/6 Yellowish Brown	Sandy Clay	50% Sandy Clay; 50% Cobbles/Pebbles
5	B	37	Habitation Debris #2/Floor Cap and Ballast (Plaza)		2.50	1.50	3.75	0.14	0.53	10YR 4/6 Dark Yellowish Brown	Sandy Clay Loam	80% Cobbles/Pebbles; 20% Sandy Clay Loam
5	B	41	Habitation Debris #3 (Plaza)		1.38	1.00	1.38	0.01	0.02	10YR 4/4 Dark Yellowish Brown (Mottled)	Sandy Loam/Loam	100% Sandy Loam/Loam
5	B	42	Habitation Debris #3 (Plaza)		2.00	1.00	2.00	0.06	0.12	10YR 4/4 Dark Yellowish Brown (Mottled)	Sandy Loam/Loam	100% Sandy Loam/Loam
5	A	12	Other (2018 Backfill Cleanup)		4.00	3.00	12.00	0.00	0.00	NA	NA	NA
5	B	24	Other (2018 Backfill Cleanup)		4.00	3.00	12.00	0.00	0.00	NA	NA	NA

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
Total Volume Excavated, Op 5, 2019 (m3) 6.91												
6	B	43	Buried Horizon (Natural/Sterile)		1.00	1.00	1.00	0.17	0.17	10YR 4/3 Brown	Sandy Loam	100% Sandy Loam
6	B	44	Buried Horizon (Natural/Sterile)		1.00	1.00	1.00	0.23	0.23	10YR 4/4 Dark Yellowish Brown	Sandy Loam	100% Sandy Loam
6	B	17	Colluvium/Fall	LC-TC	2.00	1.00	2.00	0.40	0.80	10YR 5/4 Yellowish Brown	Sandy Loam	55% Sandy Loam; 40% Cobbles; 5% Roots
6	B	19	Colluvium/Fall		1.50	1.00	1.50	0.08	0.12	10YR 4/3 Brown	Sandy Loam	99% Sandy Loam; 1% Small Pebbles
6	B	32	Colluvium/Fall		0.50	1.00	0.50	0.11	0.06	10YR 4/3 Brown	Silty Clay Loam	75% Silty Clay Loam; 15% Roots; 10% Pebbles
6	B/C	2	Colluvium/Fall		0.50	1.50	0.75	0.15	0.11	10YR 4/4 Dark Yellowish Brown	Silty Clay Loam	75% Silty Clay Loam; 15% Pebbles/Cobbles; 10% Roots
6	B/C	3	Colluvium/Fall	LC-TC	0.50	1.50	0.75	0.05	0.04	10YR 4/4 Dark Yellowish Brown	Silty Clay Loam	75% Silty Clay Loam; 15% Pebbles/Cobbles; 10% Roots
6	C	5	Colluvium/Fall		0.50	0.50	0.25	0.15	0.04	10YR 5/4 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	C	9	Colluvium/Fall		1.00	0.50	0.50	0.18	0.09	10YR 4/4 Dark Yellowish Brown	Sandy Loam	95% Sandy Loam; 5% Small Roots
6	C	10	Colluvium/Fall		1.00	0.50	0.50	0.16	0.08	10YR 4/4 Dark Yellowish Brown	Sandy Loam	90% Sandy Loam; 10% Small Cobbles and Pebbles

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
6	D	3	Colluvium/Fall		1.00	2.00	2.00	0.02	0.05	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Sandy Clay Loam; 10% Small Pebbles
6	C	7	Construction Core (Plaza)		3.00	0.50	1.50	0.13	0.20	10YR 4/4 Dark Yellowish Brown	Clay Loam	90% Cobbles; 10% Clay Loam
6	A	24	Construction Core (Str. 1/2 Sub)		1.00	1.00	1.00	0.24	0.24	10YR 5/6 Yellowish Brown	Sandy Loam	100% Sandy Loam (note patches of red clay)
6	B	39	Construction Core (Str. 1/2 Sub)		1.00	1.00	1.00	0.09	0.09	10YR 5/4 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	B	40	Construction Core (Str. 1/2 Sub)		1.00	1.00	1.00	0.14	0.14	10YR 5/4 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	B	41	Construction Core (Str. 1/2 Sub)	EC	1.00	1.00	1.00	0.20	0.20	10YR 5/4 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	B	42	Construction Core (Str. 1/2 Sub)/Occupation Horizon		1.00	1.00	1.00	0.10	0.10	10YR 4/3 Brown	Sandy Loam	100% Sandy Loam
6	A	14	Construction Core (Str. 1/2) #1		2.00	0.50	1.00	0.14	0.14	10YR 5/8 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	A	15	Construction Core (Str. 1/2) #1		2.40	0.50	1.20	0.16	0.19	10YR 5/8 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	A	16	Construction Core (Str. 1/2) #1	LC-TC	1.30	1.00	1.30	0.24	0.31	10YR 5/4 Yellowish Brown	Clay Loam	70% Clay Loam; 30% Pebbles
6	A	17	Construction Core (Str. 1/2) #1		1.80	1.00	1.80	0.06	0.11	10YR 5/4 Yellowish Brown	Clay Loam	80% Clay Loam; 10% Pebbles; 10% Cobbles

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
6	A	23	Construction Core (Str. 1/2) #1		2.00	1.00	2.00	0.14	0.28	10YR 5/4 Yellowish Brown	Clay Loam	80% Clay Loam; 10% Pebbles; 10% Cobbles
6	A	18	Construction Core (Str. 1/2) #2		1.60	1.00	1.60	0.12	0.20	10YR 5/4 Yellowish Brown	Clay Loam	78% Clay Loam; 10% Pebbles; 10% Cobbles; 2% Small Boulders
6	A	20	Construction Core (Str. 1/2) #2		1.00	1.00	1.00	0.48	0.48	10YR 5/4 Yellowish Brown	Sandy Clay	100% Sandy Clay
6	A	25	Construction Core (Str. 1/2) #2		2.00	1.00	2.00	0.06	0.12	10YR 5/4 Yellowish Brown	Clay Loam	100% Clay Loam
6	A	26	Construction Core (Str. 1/2) #2		2.00	0.50	1.00	0.16	0.16	10YR 5/6 Yellowish Brown	Clay or Sandy Clay (mottled)	100% Clay or Sandy Clay (mottled)
6	A	21	Construction Core (Str. 1/2) #3		1.00	1.00	1.00	0.41	0.41	10YR 6/6 Brownish Yellow	Sandy Clay	100% Sandy Clay
6	A	22	Construction Core (Str. 1/2) #3		1.00	1.00	1.00	0.30	0.30	10YR 6/6 Brownish Yellow	Sandy Clay	100% Sandy Clay
6	B	27	Floor Cap and Ballast (Plaza)	LC-TC	3.00	0.50	1.50	0.15	0.23	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Cobbles; 10% Sandy Clay Loam
6	B	31	Floor Cap and Ballast (Plaza)	LC-TC	0.65	1.00	0.65	0.14	0.09	10YR 5/4 Yellowish Brown	Clay Loam	70% Cobbles and Large Pebbles; 30% Clay Loam
6	B	35	Floor Cap and Ballast (Plaza)	LC-TC	0.50	1.00	0.50	0.19	0.10	10YR 5/4 Yellowish Brown	Clay Loam	90% Rounded Cobbles; 10% Clay Loam
6	B	37	Floor Cap and Ballast (Plaza)		1.00	1.00	1.00	0.17	0.17	10YR 4/4 Dark Yellowish Brown	Clay Loam	90% Cobbles and Clay Surface; 10% Clay Loam
6	B/C	5	Floor Cap and Ballast (Plaza)		0.50	1.50	0.75	0.08	0.06	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Cobbles; 10% Sandy Clay Loam

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
6	B/C	8	Floor Cap and Ballast (Plaza)		0.50	1.00	0.50	0.17	0.09	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Cobbles; 10% Sandy Clay Loam
6	B/C	9	Floor Cap and Ballast (Plaza)	LC-TC	1.00	1.00	1.00	0.24	0.24	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Cobbles; 10% Sandy Clay Loam
6	C	6	Floor Cap and Ballast (Plaza)		0.50	0.50	0.25	0.18	0.04	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Cobbles; 10% Sandy Clay Loam
6	B	28	Habitation Debris (Str. 1/2 Sub)	LC-TC	3.00	0.50	1.50	0.12	0.18	10YR 5/4 Yellowish Brown	Sandy Loam	95% Sandy Loam; 5% Pebbles and Small Cobbles
6	B	29	Habitation Debris (Str. 1/2 Sub)	LC-TC	0.50	1.00	0.50	0.15	0.07	10YR 5/4 Yellowish Brown	Sandy Loam	95% Sandy Loam; 5% Pebbles and Small Cobbles
6	B	34	Habitation Debris (Str. 1/2 Sub)		0.65	1.00	0.65	0.11	0.07	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	98% Sandy Clay Loam; 2% Small Pebbles and Cobbles
6	B	36	Habitation Debris (Str. 1/2 Sub)		0.50	1.00	0.50	0.05	0.03	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	98% Sandy Clay Loam; 2% Small Pebbles and Cobbles
6	B	38	Habitation Debris (Str. 1/2 Sub)		1.00	1.00	1.00	0.10	0.10	10YR 5/4 Yellowish Brown	Sandy Loam	95% Sandy Loam; 5% Pebbles and Small Cobbles
6	D	4	Habitation Debris (Str. 1/2)	LC-TC	1.00	2.00	2.00	0.05	0.11	10YR 5/4 Yellowish Brown	Sandy Clay Loam	90% Sandy Clay Loam; 10% Small Pebbles
6	B	18	Habitation Debris (Supara Plaza)	LC-TC	0.30	0.30	0.09	0.05	0.00	10YR 4/3 Brown	Sandy Loam	90% Sandy Loam; 10% Pebbles
6	B	20	Habitation Debris (Supara Plaza)	LC-TC	1.50	1.00	1.50	0.04	0.06	10YR 4/3 Brown	Sandy Loam	60% Sandy Loam; 40% Angular Cobbles
6	B	21	Habitation Debris (Supara Plaza)		1.50	1.00	1.50	0.04	0.06	10YR 4/3 Brown	Sandy Loam	60% Sandy Loam; 40% Angular Cobbles
6	B	22	Habitation Debris (Supara Plaza)		1.00	0.50	0.50	0.13	0.06	10YR 4/3 Brown	Clay	60% Clay; 40% Pebbles and Cobbles

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
6	B	25	Habitation Debris (Supara Plaza)		0.28	0.40	0.11	0.01	0.00	10YR 4/6 Dark Yellowish Brown	Clay Loam	60% Crushed Granite (?); 20% Clay; 20% Clay Loam
6	B	33	Habitation Debris (Supara Plaza)		0.50	1.00	0.50	0.04	0.02	10YR 4/4 Dark Yellowish Brown	Silty Clay	90% Silty Clay; 10% Pebbles
6	B/C	4	Habitation Debris (Supara Plaza)	LC-TC	0.50	1.50	0.75	0.01	0.01	10YR 5/4 Yellowish Brown	Sandy Loam	80% Sandy Loam; 20% Cobbles
6	B/C	6	Habitation Debris (Supara Plaza)	LC-TC	0.50	1.00	0.50	0.05	0.02	10YR 5/4 Yellowish Brown	Sandy Loam	100% Sandy Loam
6	B/C	7	Habitation Debris (Supara Plaza)	LC-TC	0.50	1.00	0.50	0.13	0.06	10YR 5/4 Yellowish Brown	Sandy Loam	80% Angular Cobbles; 20% Sandy Loam
6	C	11	Habitation Debris (Supara Plaza)		1.00	0.50	0.50	0.06	0.03	10YR 5/4 Yellowish Brown	Sandy Clay Loam	80% Cobbles; 20% Sandy Clay Loam
6	A	13	Humus		1.00	1.00	1.00	0.06	0.06	10YR 5/6 Yellowish Brown	Sandy Loam	99% Sandy Loam; 1% Small Pebbles
6	B	30	Humus		0.50	1.00	0.50	0.08	0.04	10YR 4/4 Dark Yellowish Brown	Silty Clay Loam	80% Silty Clay Loam; 10% Pebbles; 10% Roots
6	B/C	1	Humus	LC-TC	0.50	1.50	0.75	0.02	0.01	10YR 5/4 Yellowish Brown	Loam	80% Loam; 10% Pebbles; 10% Roots
6	C	4	Humus		0.50	0.50	0.25	0.05	0.01	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	95% Sandy Clay Loam; 5% Small Roots
6	C	8	Humus		1.00	0.50	0.50	0.04	0.02	10YR 4/4 Dark	Sandy Clay Loam	95% Sandy Clay Loam; 5% Small Roots

Context				Ceramic Date	Metrics					Matrix Description		
Op	Subop	Lot	Designation		N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
6	D	1	Humus		2.00	1.50	3.00	0.22	0.65	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	95% Sandy Clay Loam; 5% Small Roots
6	D	2	Humus	LC-TC	1.00	2.00	2.00	0.03	0.06	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	95% Sandy Clay Loam; 5% Small Roots
6	B	23	Other (Backing Masonry Str. 1/2)		1.36	1.00	1.36	0.08	0.11	10YR 4/4 Dark Yellowish Brown	Sandy Loam	50% Boulders; 40% Sandy Loam; 10% Pebbles and Cobbles
6	B	24	Other (Backing Masonry Str. 1/2)		1.36	1.00	1.36	0.03	0.04	10YR 4/6 Dark Yellowish Brown	Sandy Clay Loam	60% Sandy Clay Loam; 30% Small Cobbles and Pebbles; 10% Large Cobbles and Boulders
6	B	26	Other (Backing Masonry Str. 1/2)		0.50	1.00	0.50	0.36	0.18	10YR 4/6 Dark Yellowish Brown	Sandy Loam	80% Sandy Loam; 20% Large Cobbles
6	A	19	Other (Core Masonry - Str. 1/2)		0.60	1.00	0.60	0.30	0.18	10YR 5/4 Yellowish Brown	Clay Loam	80% Clay Loam; 20% Cobbles
Total Volume Excavated, Op 6, 2019 (m3) 8.71												

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Chapter 3. The 2019 Settlement Investigations at Alabama: Operation 9 at ALA-002

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Dave Blaine (Athabasca University)
Virginia Chiac (Maya Mopan Village)

This chapter presents results of Phase II Testing at the ALA-002 settlement site. Located in Property Block C2 within the west half of the Alabama settlement zone, ALA-002 lies approximately 750 m from the monumental core (see Figure 1.3 in Chapter 1, this volume). The site was chosen for testing as a representative sample of a Type VI settlement site (Ashmore et al. 1994)—identified during Phase I Reconnaissance (Peuramaki-Brown et al. 2014, 2015)—and due to its excellent condition despite being in the middle of an active, industrial-scale citrus orchard. Two of the three mounds that make up the group were virtually undisturbed by modern orchard preparation activities and planting. This is in contrast to the heavily disturbed ALA-047: a Type VI site in Block C1, investigated in 2016 (Morton et al. 2016). Original orchard preparation involved chain clearing of vegetation, the pushing aside of materials with a bulldozer, burning of resulting debris piles, followed by ploughing (H. Chiac Sr., personal communication, 2014).

The ALA-002 testing excavation program was designated SCRAP Operation 9 (Op 9). An additional shovel testing program operated simultaneously within the patio/ plaza area of the site (Operation 10; see Chapter 4, this volume). Op 9 excavations and documentation took place from May 24 to July 26, 2019. They were directed by Dr. Meaghan Peuramaki-Brown (MPB) and supervised by MPB (ALA-002A, ALA-002B), Dave Blaine (DB; ALA-002C), and Virginia Chiac (VC; ALA-002 plaza). Assisting at various times with the operation were the following team members: Idelfonso Cal (IC), Higinio Chiac Sr. (HCSr), Higinio Chiac Jr. (HCJr), Justino Chiac (JC), Sylvestro Chiac (SC), Diego Paquiul (DP), Juan Paquiul (JP), Lapercio Salam (LS), Damacio Sho (DS), and Aaron Tush (AT). Additional field assistance was provided by Frank Tzib (FT), Erin Niki Phillips (ENP), Gillian Taylor (GT), Dr. Stephen Fokké (SF; Suriname Built Heritage Foundation), Dr. Irene Meulenberg (IM; Archeologische Dienst Suriname), Paul Smith (PS; Institute of Archaeology), and Dr. Sherman Horn (SH).

Operation 9: Test Excavations at ALA-002

During our initial visit to the Alabama site in 2013—prior to the first SCRAP field season (2014)—Community Liaison, Mr. Higinio Chiac Sr., brought us to ALA-002 after having visited the Alabama monumental core. We noted that two of the associated mounds were relatively large for the settlement—well over 2 m tall—and the presumed 'patio' or 'plaza' area was impressive and appeared to be formally paved or built up (Figure 3.1).

The site area was cleared for citrus in 2008. Prior to that, subsistence farmers operated in the area during the 1980s/90s (H. Chiac Sr., personal communication, 2019). The banana plantation in operation in the 1950s and 60s did not impact this area of Alabama (confirmed by satellite/aerial imagery available from the 1960s). Evidence of recent historic activity was found in Operation 10 shovel test pitting, in the form of wooden fence posts, nails, and other historic materials (see Chapter 4, this volume).

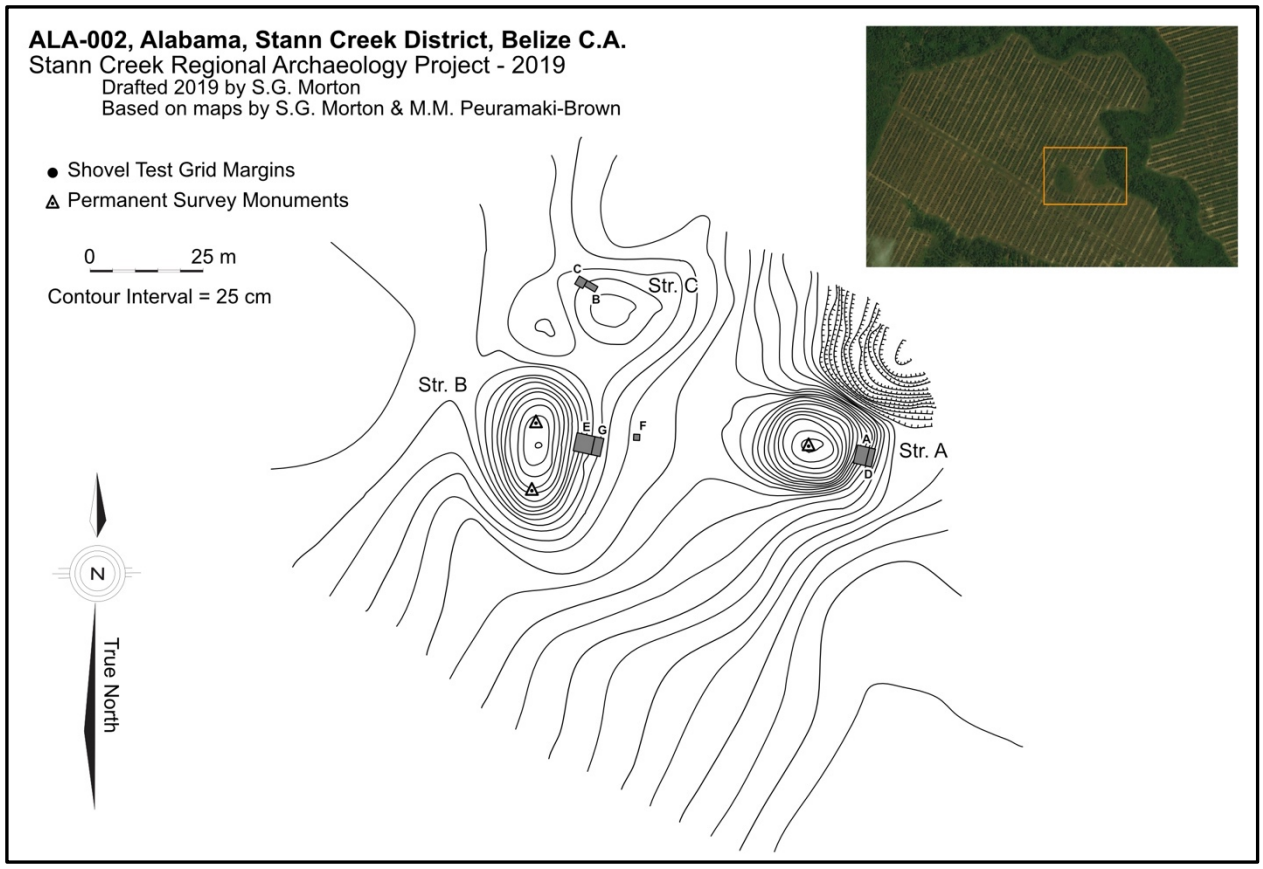

Figure 3.1: Topographic map of ALA-002 settlement site with location of 2019 excavations and corresponding aerial image (inset).

While clearing the area for citrus, orchard workers led by Mr. Chiac (previously employed as a foreman for the company), noticed the area was very rocky (the plaza surface/ballast) and recovered a variety of artifacts following clearing and ploughing (Figure 3.2). These included impressive pieces of chert and obsidian (non-local resources), as well as groundstone implements (e.g., adzes/celts). Coconut palm growing atop two of the three mounds make this group an ideal place for citrus orchard workers to seek shade, and its location adjacent an active stream makes it a desired swimming place to cool down on hot days.

Figure 3.2: Surface artifacts from ALA-002, collected during agricultural preparation (H. Chiac Sr.).

ALA-002 is a Type VI settlement site, consisting of three orthogonally arranged mounds: ALA-002A (2.5 m tall), ALA-002B (2.75 m tall), and the low-lying ALA-002C (~0.5 m tall). A large borrow pit is located off the north side of ALA-002A, dug into the south bank of the nearby stream, which was likely used as a quarry for architectural earthen-core construction materials. Similar practices have been noted and documented for the monumental core at Alabama. ALA-002 has a formal plaza space, which is visible topographically in elevation and consists of large pebble and small cobble ballast. Given its size (approximately 2250 m^2) and openness along the southern edge, we have elected to use the term plaza (rather than patio) to describe the formal architecture associated with space between the mounds. The function of this space is the subject of research in Op 10 (Chapter 4, this volume).

In 2014, SCRAP crews created pace-and-compass maps of the associated mounds, and attempted to collect materials at surface, though the tall grass on the mounds meant little would likely be recovered in those areas. In 2019, large portions of the mounds were cleared of grasses and low bush so that we could better assess the condition of underlying architecture, and to create a topographic map of the group. Permanent group datums were established atop ALA-002A and ALA-002B and tied into the monumental core. Additionally, GPS coordinates were collected for the datums as well as the grid corners for Op 10 test pitting. This process of GPS data capture and the georeferencing of topographical survey datasets are explained in detail in our 2018 field report (Blaine 2018).

Methods

Op 9 test excavations targeted the backsides of ALA-002A and ALA-002C, while excavations at ALA-002B targeted the front of the mound where slight looter damage had occurred and to better examine the intact stair (the only known example in the settlement zone). Units were positioned to expose intact architecture and recover preliminary artifact assemblages for chronological assessment and typing.

All excavations were recorded using the forms, guides, and systems described in Appendix B of this volume, and all matrix was screened using ¼-inch mesh (unless otherwise indicated). Summaries of excavation contexts are provided in the following sections, including individual lot data presented in Table 3.1 (end of chapter) and bulk artifact counts in Appendix A of this report. All AMS carbon dates reported were conducted at the A.E. Lalonde AMS laboratory in Ottawa, Canada. Measurements of granite ashlars were conducted at each mound by Ms. Virginia Chiac.

All excavations were photographed, and 3D models are currently being generated. Coins stamped 2018 (no 2019 available) were placed at the bottom of excavations, along with heavy plastic lining, prior to backfilling. Copies of all associated paperwork, drawings, and photos are on file at the Belize Institute of Archaeology in Belmopan. Artifacts are currently in storage in Maya Centre, Stann Creek District, Belize.

ALA-002A: Suboperations 9A & 9D

The ALA-002A mound consists of a roughly square-shaped building platform on the east side of the ALA-002 group. It measures approximately 20 m (E/W) by 20 m (N/S) at its base and is roughly 2.5 m tall. Large coconut palms grow atop this mound; thus, it was nicknamed Coconut Hill by the field team. Based on shovel test pits in the plaza space (Op 10, Chapter 4), aerial shots of the group, topographic information, and excavation data, we know the formal plaza area starts at roughly the halfway point along the south face of the platform in this area and does not run beneath the ALA-002A platform.

Prior to unit set-up, we cleared along the east side of ALA-002A, which we presumed to be the backside of the platform, and where alignments of hewn granite construction blocks (ashlars) were visible at surface. To the north of this, the ground drops down into a borrow pit along the south edge of the nearby stream that marks the north boundary of the Block C2 settlement area. Some clearing was done here to get a better sense of topography, and future testing will occur in this low area to determine if occupation/habitation debris was dumped there.

All excavation units at ALA-002A were oriented 11º E of mN, based on exposed architectural alignments along the east face of the mound. Suboperation (Subop) 9A was a 3 m (N/S) x 2 m (E/W) excavation unit positioned on the east side (back) of the mound. The unit was aligned with the exposed facing stones/ashlars (west end of unit) and extended downslope with the aim of recovering off-platform debris as well as architectural information. The excavation area was later extended to the east by 1 m as Subop 9D to capture additional off-platform space and associated debris.

Associated excavation drawings on file at the Institute of Archaeology in Belmopan include SCRAP2019-DN003 (Figure 3.3) and DN004 (Figure 3.4).

Humus. Because the ALA-002A mound was not subject to any major clearing or ploughing activity, we encountered an intact humus layer above the fall/colluvium. This is important when considering what the initial conditions of mounds in the orchard would have been like prior to clearing/ploughing. The humus was removed from on-mound areas as Lot 9A-1, and off-mound areas as Lots 9A-2 and 9D-1 and ranged between 10 to 20 cm in thickness. Initial removal of the humus exposed over 20 hewn granite facing blocks (ashlars)—found both in situ and fallen/slumped—in the west half of Subop 9A, along with much burned wood/carbon flecks. Ashlars from this mound were measured for future standardization studies of granite-block production at Alabama (Table 3.2). Large ceramic sherds were exposed along with other fallen granite ashlars and boulders in the west end of Subop 9A and throughout Subop 9D, where we also encounter some large daub pieces. This daub confirmed the presence of a perishable structure atop the platform. Excavation of the humus ceased when fallen construction material was encountered across the units.

Bulk ceramics, daub, and lithic chippedstone debris (phyllite [unknown fragments, blocky fragments/shatter], quartz [secondary, tertiary, and reduction flakes, blocky fragments/shatter], chert [bifacial reduction flakes, blocky fragments/shatter] were recovered from this context. Small finds included a chert thin-biface fragment (10465-LT006), two obsidian blade fragments (10465-OB004, OB005), and a modified cobble or hammerstone (10465-OT003). Ceramic materials were stylistically assigned to the Late/Terminal Classic, including jar forms, a ring base, solid nubbin feet, a hollow oven foot, and a scored censer.

Associated excavation photos include Black Camera 123-4852 to 4854, 4856, 4859 to 4860, 4862-4865 (Lot 9A-1, top); 124-4869, 4875 to 4880 (Lot 9A-1, bottom; Lot 9A-2, top); 124-4884 to 4900 (Lot 9A-2, bottom); 125-4901 to 4905, 4911 to 4914 (Lot 9D-1, top); 125-4915, 4917 to 4925 (Lot 9D-1, bottom).

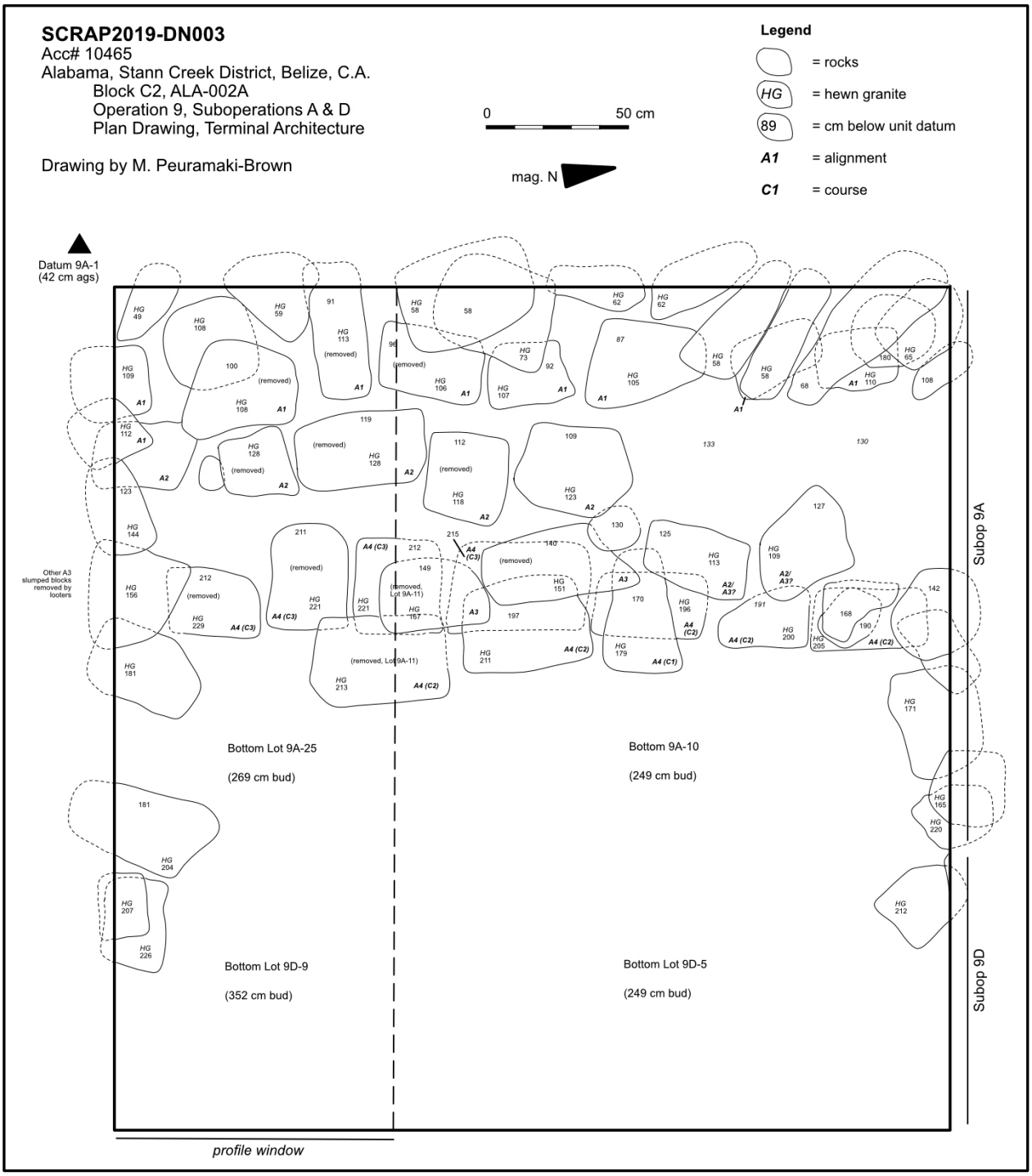

Figure 3.3: Plan drawing of Subops 9A and 9D, terminal architecture at ALA-002A.

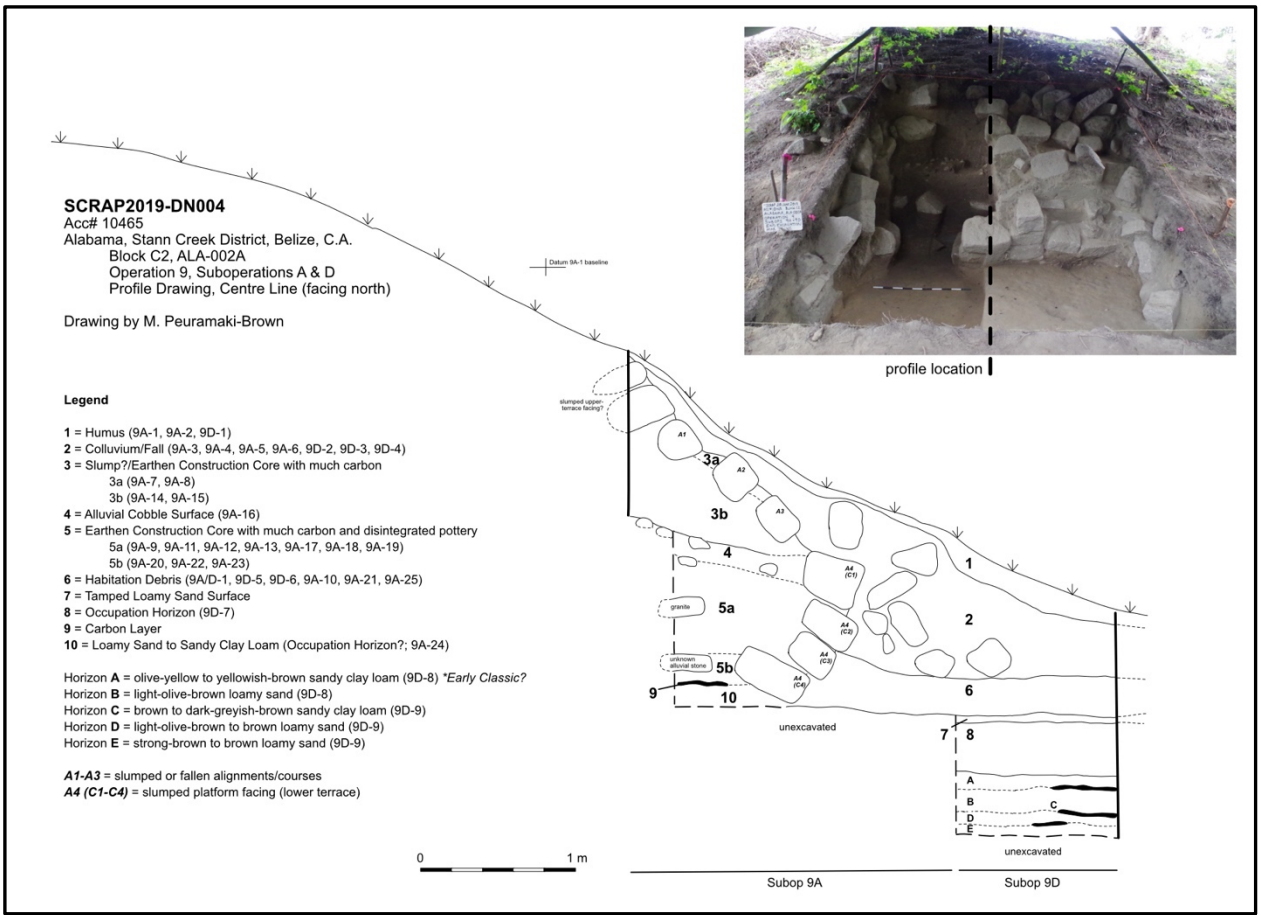

Figure 3.4: Profile drawing of Subops 9A and 9D at ALA-002A.

Colluvium/Fall (On-Mound). Once all humus was removed and fallen ashlars appeared across both units, we began further clearing around the fall and removing associated matrix in on-mound areas (Lot 9A-3). Four alignments of stones were ultimately noted atop the mound, visible below fallen ashlars. The single-course alignments of A1, A2, and A3 appeared at slightly different orientations to the likely intact, multi-course lower platform facing(A4), suggesting they may have been slumped courses from a terrace facing further up the platform that had shifted downslope. Earthen-core architecture presents significant heaving over time, so this is not unexpected. Significant slumping action was also noted in the oddly stacked appearance of stones to the west of A1 (up slope), representing sections of a slumped or fallen double/triple-course alignment of granite cut stones of various sizes (these were left in-tact as they were embedded in the unit wall).

Bulk ceramics, daub, and lithic chippedstone debris (quartz [reduction flake, unknown flake, blocky fragments/shatter]) were recovered from this context. No small finds were recovered. Ceramic materials could not be stylistically assigned to a period.

Associated excavation photos include Black Camera 124-4884 to 4900 (Lot 9A-3, top); 126-4939 to 5022 (Lot 9A-3, bottom).

Colluvium/Fall (Off-Mound). In the off-mound area, we removed colluvium/fluvium and fall from east to west, toward the A4 platform facing (Lots 9A-5, 9A-6, 9D-2, 9D-4). Throughout these lots, we encountered much carbon (small flecks), along with friable ceramics and heat-exposed chert (pink-red with potlid scars); associated with fallen ashlars, we believe this suggests

burning of the building at some point (intentional or unintentional remains unknown), possibly as part of the ultimate structural collapse process.

While continuing to remove fall, we confirmed two intact courses of the platform facing in the east end of Subop 9A, approximately 50 cm from the east wall/Subop 9D (C1 and C2 in profile). These hewn granite blocks of the facing were slumped forward (downhill to the east) but remained stacked and in alignment. Based on associated fall patterns in excavations and associated profiles, it is possible that two additional courses once sat above this intact section. Based on fall in Subop 9D that continued downward, we determined these intact courses were likely not the lowest courses of the face. Much carbon was encountered close to the platform facing as we continued to move down removing fall in search of the lowest course. The platform orientation was now visible and found to be correctly aligned with our unit (the slump on-mound made it appear to be out of line).

Three carbon samples were collected—two from higher up in 9A-5 (10465-CB007, CB008), and one from the bottom of 9A-6 secured below a slumped course of the intact A4 platform facing(10465-CB016)—representing the upper and lower limits of this context. Unfortunately, only the lowest sample was large enough for AMS dating, returning a date of cal AD 663-770 (95.4%). Because this was material found slightly below a slumped stone of the platform face, it might suggest burning of the building prior to ultimate collapse. Alternatively, because the sample is from the very bottom of the lot, it could be associated with upper reaches of habitation debris immediately below. Since no carbon was noted in the lower lots, it is presumed to be associated with the colluvium/fall.

Excavation ceased when we found fallen ashlars laying horizontally, the density of carbon flecks began to lessen, and we began encountering unburned artifacts, including larger pieces of ceramics and daub, presumed to be habitation debris atop an occupation surface. At this point, we switched lots to be excavated as a possible mixed fall/habitation debris context at the base of the last fallen ashlars exposed.

Bulk artifacts recovered include ceramics, daub, and lithic chippedstone debris (quartz [secondary, thinning, and reduction flakes, blocky fragments/shatter], arkose sandstone [primary flake], chert [tertiary and bifacial reduction flakes], slate [blocky fragment/shatter]). Small finds include two obsidian blade fragments (10465-OB013, OB018). Ceramic materials were stylistically assigned to the Late/Terminal Classic, including fragments of jar forms, a Hondo dish, a Dolphin Head dish, a fluted Hondo piece, and a British Honduras Volcanic Ash hollow oven foot.

Associated excavation photos include Black camera 127-5024 to 5036 (Lot 9A-5, top); 128-5041 to 5066 (Lot 9A-5-bottom; Lot 9A-6, top; Lot 9D-4, top); 129-5067 to 5095 (Lot 9A-6, bottom; Lot 9D-4, bottom); (125-4915 to 4925 (Lot 9D-2, top); 126-4939 to 5022 (Lot 9D-2, bottom).

Colluvium/Fall (Looters' Backdirt). While away from the site over the weekend, part way through our excavation of the colluvium/fall in the off-mound areas, our excavations were disturbed by unknown individual(s). Fortunately, they did minimal damage and only pulled out previously identified and photographed fallen stones covering the slumped alignments. This disturbance, and similar activities at ALA-002B and ALA-002C, were documented and reported to the property owner, the village Alcalde, and the Institute of Archaeology who in turn filed a report with the police (see Appendix C for full details). Lot 9A-4 and 9D-3 served as clean-up of the looters' backdirt.

No bulk artifacts, nor small finds, were recovered from the area of Subop 9A. In Subop 9D, we recovered some bulk ceramics including a fragment of a Hondo jar dating to the Late/Terminal Classic. Associated excavation photos include Black Camera 126-4939 to 5022

(top, pre-looting); Black Camera 127-5024 to 5036, 128-5041 to 5066 (bottom); SCRAP_Official-5465 to 5468 (top, post-looting).

Slump/Construction Core (On-Mound, post-Looters' Backdirt cleaning). Once the disturbed Looters' Backdirt was removed, we continued removal of likely fallen material from around the observed on-mound alignments, some of which had been disturbed by the vandals (Lots 9A-7, 9A-8). It is possible that some earthen construction core was also removed, based on different soil texture and colour, and we ultimately encountered no clear platform surfaces between fallen earthen material, slumped alignments, and the earthen core of the platform. We also encountered carbon throughout.

Bulk artifacts recovered include ceramics, daub, and lithic chippedstone debris (quartz [primary and reduction flakes]). Small finds included an obsidian blade fragment (10465-OB022). Ceramic materials were stylistically assigned to the Late/Terminal Classic, including fragments of Dolphin Head dishes, Hondo jars, jars with ovoid punctations, and censer appendages.

Associated excavation photos include Black Camera 127-5024 to 5037, 129-5067 to 5095, 130-5096 to 5595, 131-5596 to 5654 (Lots 9A-7 and 9A-8, top); 131-5655 to 5662, 131-5663 to 5899 (Lots 9A-7 and 9A-8, bottom).

Fall/Habitation Debris (off-mound). This was a thin layer (avg. ~7 to 9 cm thick; Lots 9A-10 and 9D-5) of possible mixed fall matrix and habitation materials, removed from around the base of remaining fallen ashlars (which were removed during later excavation). No daub was recovered, which possibly confirmed that we were securely out of the fall layer and into habitation debris, and a greater number of artifacts were encountered closer to the platform. Carbon flecks continued to appear closer to the platform face. Removal of this layer also allowed us to further expose the platform face, which was confirmed to be severely slumped at almost a 45° angle as we moved down further. This severe slump would limit our ability to approach the basal course of the facing in further excavation (one of the reasons it was only approached fully in the profile window described below, allowed us to excavate into the mound.

Bulk artifacts included ceramics and lithic chippedstone debris (phyllite [unknown flake], slate [unknown flake], chert [primary, shaping, reduction, and finishing flakes, blocky fragment/shatter], quartz [secondary flake, blocky fragment/shatter]). Small finds included three obsidian blade fragments (10465-OB027, OB028, OB029), an obsidian prismatic-blade-core rejuvenation flake (10465-OB030), a chert thick-biface fragment (10465-LT006), and an unknown fragment of a worked slate item, possibly cylindrical in form (10465-GS011). Ceramic materials were stylistically assigned to the Late/Terminal Classic, including fragments of a British Honduras Volcanic Ash bowl, a Hondo base, a solid nubbin foot, and various bowl and jar forms.

Associated excavation photos include Black camera 131-5663 to 5899 (Lot 9A-10, top); 129-5067 to 5097 (Lot 9D-5, top); 132-5903 to 6115 (Lot 9A-10 and Lot 9D-5, bottom).

Habitation Debris and Occupation Surface (off-mound). We continued to remove habitation debris in off-mound areas as part of Lots 9A/D-1, 9D-6, 9A-21, and 9A-25. This material sat directly atop a thin (avg. ~5 cm), prepared (tamped) occupation surface, consisting of a light-coloured (2.5Y 4/4 olive brown) loamy sand, which was found to continue under the bottom course of the terminal platform facing and clearly visible in excavation profiles. A carbon sample (10465-CB002) was collected from the vertical midpoint of the context and returned a date of cal AD 651-774 (95.4%). Fewer materials were encountered in this level, suggesting perhaps that this was in fact penultimate habitation debris, with the material higher up (mixed with fall)

being terminal. The matrix between the two also differed, with this lower layer being a sandier loam and that higher up being a clayey loam.

In removing the habitation debris, we exposed a total of four courses of ashlars making up the intact (yet slumped) platform face. As mentioned above, these leaned precariously to the east. This is likely from platform swelling/shearing, as the earthen core settled (Pendergast 1990). It is possible that this had already started to occur in antiquity and that this was known to be a problem. The stonework of the facing did not appear to help the situation, as most consisted of a stack bond/vertical joint (aligning all joints vertically), which should only be used in non-structural faces, such as veneers (this facing served as both facing and core face). A more stable common bond (a course of stones laid with the short end along the facing at regular intervals between courses of stretchers) or breaking joints (staggering joints) has been found in other platforms of the Alabama settlement (e.g., ALA-047C; Morton et al. 2016: fig. 3.16; Manson 1982:24-25; Wernecke 2005:89). Wedge-shaped stone chinking were used both vertically and horizontally between stones (see examples below), though not consistently. We did not recover an obvious mortar between stones, unlike at ALA-002B (see below) and in the monumental core (Chapter 2, this volume).

Bulk artifacts included ceramics, daub, and lithic chippedstone debris (possible dolomite [primary flake], quartz [tertiary and thinning flakes], slate [primary flake], chert [resharpening flake]). Small finds included three obsidian blade fragments (10465-OB024, OB025, OB034, OB045) and an obsidian flake (10465-OB023). Ceramic materials were stylistically assigned to the Late/Terminal Classic (Dolphin head bowl and dish fragments), but also two possible Early Classic sherds (a dish rim similar to Early Classic shallow dishes in Toledo but could still be Late Classic).

Associated excavation photos include Black camera 132-5903 to 6115 (Lot 9A/D-1, top); 134-6354 to 6364 (Lot 9A/D-1, bottom; Lot 9D-6, top); 134-6370 to 6615 (Lot 9D-6, bottom); 139-6692 to 6702 (Lot 9A-21, top); 139-6708 to 6718 (Lot 9A-21, bottom); 140-6729 to 6736 (Lot 9A-25, top); 140-6737 to 7082 (Lot 9A-25, bottom).

Profile Window into Platform (Construction Core). Once we finished exposing the slumped stone alignments on the mound, we excavated a 1.5 m wide profile window into the presumed earthen construction core along the south side of the excavation area. This area was determined to be closer to the actual centerline of the platform (based on rough measurements) and was in an area where many in-situ blocks were already missing from the exposed platform facing (A4). We excavated the profile in two rough sections (detailed below). As part of these excavations, we removed the slumped platform facing (A4) so that it would not topple when we removed the earthen core from behind, and so we could observe the stratigraphy right up to the facing and below.

Between A4 and A2 represents the platform area immediate behind (to the west) of the intact, yet slumped, multi-course facing. We removed earthen material from immediately behind C1 (Lots 9A-9, 9A-11), which possibly included some remaining fall/slumped materials; behind C2 (Lots 9A-12, 9A-13), firmly within the earthen core; and behind C3 and C4 (Lots 9A-20, 9A-22). Matrix descriptions remained consistent, until a slight colour change and transition to loamy sand was noted in the lowest lots (9A-20, 9A-22). At this point, a carbon-rich layer was also encountered below and behind the C4 stones, atop a loamy sand to sandy clay loam textured matrix, possibly representing the occupation surface/horizon beneath the platform. No clear core face was encountered behind the facing, though occasional single, "floating," large alluvial cobbles and small boulders were encountered.

Bulk artifacts included ceramics, four pieces of daub, and lithic chippedstone debris (slate and phyllite [unknown flakes], quartz [tertiary flake]); however, the vast majority of these were

encountered in the two upper-most lots behind C1, with almost no material recovered from the lower earthen construction core lots. No small finds were recovered. Ceramic materials were stylistically assigned to the Late/Terminal Classic, including fragments of Dolphin Head dishes behind C1, and an unknown dish fragment behind C4. A carbon sample (10465-CB024) from the earthen core behind C4 was dated to cal AD 670- 778 (75.3%; cal AD 786-829 [17.3%]; cal AD 855-872 [2.8%]).

Associated excavation photos include Black Camera 131-5663 to 5899 (Lot 9A-9, top); 132-5903 to 6115 (Lot 9A-9, bottom; Lot 9A-11, top); 133-6116 to 6127 (Lot 9A-11, bottom; Lot 9A-12, top); 134-6129 to 6353 (Lot 9A-12, bottom; Lot 9A-13, top); 134-6354 to 6621 (Lot 9A-13, bottom); 139-6682 to 6691 (Lot 9A-20, top); 139-6692 to 6702 (Lot 9A-20, bottom); 139-6708 to 6718 (Lot 9A-22, top); 139-6719 to 6728 (Lot 9A-22, bottom).

Between A2 and A1 (west end Subop 9A), we encountered a continuous surface/layer of small alluvial cobbles at roughly the same level as C1 and removed this as Lot 9A-16. A few similar cobbles were found in the corresponding upper layers of the A4 to A2 section of the profile window, though not a consistent surface, but may be an extension that has since been disturbed due to slumping of the platform. Above this cobble layer (above the level of C1), the matrix was full of artifacts and carbon flecks (Lots 9A-14, 9A-15); it remains unclear if this is fallen material associated with the platform slumping, or a terminal phase of construction (e.g., an upper platform terrace), while the cobble surface may represent a lower/earlier terrace. In general, the earthen construction core below the cobble surface (Lots 9A-17 and 9A-18 [C2 level], 9A-19 [C3 level], and 9A-23 [C4 level]) and above the carbon layer of the occupation surface (Lot 9A-24), consists of a darker grey-brown matrix with a slightly higher clay content and more carbon flecks and disintegrating ceramic bits. No clear geological strata could be identified within the construction core, though shifts in densities of artifact materials may be a future indicator to consider more closely. Most artifact materials were recovered from Lot 9A-14, above the cobble surface, and Lot 9A-19 closer to the bottom of the construction core. Additional floating granite boulders—some hewn and others not—were encountered within the construction core, but in no clear arrangement. More extensive excavations will be necessary to clarify the exact process of platform construction.

Bulk artifacts included ceramics, some pieces of daub, and lithic chippedstone debris (phyllite [primary flake], slate [primary, tertiary, and reduction flakes], quartz [bifacial reduction, thinning, shaping, and finishing flakes, blocky fragments], chert [bifacial reduction, shaping, and tertiary flakes, blocky fragments], quartzite [blocky fragments]). Small finds recovered included an obsidian blade fragment (10465-OB046) and flake (10465-OB047), and a groundstone celt/adze of unknown material (10465-GS003). Ceramic materials were stylistically dated to the Late-Terminal Classic throughout the construction core—above and below the cobble surface—and included fragments of S-stamp bowls, Dolphin Head dishes, and other temporally diagnostic dish, bowl, and jar forms. Three carbon samples were collected: one from immediately below the cobble surface (10465-CB018; cal AD 665-770 [95.4%]), one from the construction core immediately above the carbon layer and occupation surface (10465-CB030; cal AD 591-660 [95%], likely “old wood”), and one from within the carbon layer beneath the platform, atop the occupation surface (10465-CB031; cal AD 651-718 [78.3%], cal AD 742-767 [17.1%]).

Associated excavation photos include Black Camera 134-6370 to 6613 (Lot 9A-14, top); 137-6641 to 6648 (Lot 9A-14, bottom; Lot 9A-15, top); 138-6649 to 6655 (Lot 9A-15, bottom; Lot 9A-16, top); 138-6656 to 6664 (Lot 9A-16, bottom; Lot 9A-17, top); 138-6665 to 6673 (Lot 9A-17, bottom; Lot 9A-18, top); 138-6674 to 6681 (Lot 9A-18, bottom; Lot 9A-19, top); 139-6682 to 6691 (Lot 9A-19, bottom); 139-6719 to 6728 (Lot 9A-23, top); 140-6729 to 6736 (Lot 9A-23, bottom; Lot 9A-24, top); 140-6737 to 7082 (Lot 9A-24, bottom).

Profile Window Below Occupation Surface (off-mound). We also excavated below the terminal occupation surface in a 1 m x 1 m profile window into the off-mound area in the south end of Subop 9D. We excavated primarily in 20-cm-thick arbitrary lots to sterile.

Occupation Horizon was excavated primarily as Lot 9D-7. Twenty-one non-diagnostic ceramic sherds were encountered at the top of the lot, immediately below the prepared occupation surface, and roughly 25 cm of sterile sandy loam with no larger inclusions continued below. We then hit a series of geologically-distinct layers. Note the horizon letters only signify stratigraphic position from top (A) to bottom (E).

Horizon A is a ~10-cm-thick layer of olive-yellow to yellowish-brown sandy clay loam (~top of Lot 9D-8), roughly 40 cm below the occupation surface. This contained a single chert reduction flake, six non-diagnostic ceramic sherds, and an Early Classic flange with red and black paint on orange/cream slip (10465-T004; Figure 3.5). We also found an obsidian percussion flake (10465-OB033). This likely represents an earlier occupation horizon, which may coincide with other finds at ALA-002B and ALA-002C (detailed below). This was followed by a very thin, dark matrix lens in the east end of the profile window that did not continue across the entire excavation area (similar to Layer C described below).

Figure 3.5: Early Classic flange (Lot 9D-8; Cat# 10465-T004).

Horizon B is a ~20-cm-thick layer of light-olive-brown loamy sand, with fine to very coarse sand and subrounded to subangular gravel (< 5%, > 2 mm). This was sterile.

Horizon C is a thin, brown to dark-greyish-brown sandy clay loam (~top of Lot 9D-9) with subangular to subrounded gravel (> 5%, > 2 mm), that did not reach across the entire profile window (perhaps more accurately a "lens"). This was sterile.

Horizon D is a ~10-cm-thick layer of light-olive-brown to brown loamy sand with subrounded to subangular gravel (<5%). This was sterile.

Horizon E was encountered at the bottom of our profile window excavations, where we hit a strong-brown to brown loamy sand layer with 10% gravel inclusions. This was also sterile. Excavations ended here.

No carbon samples were recovered from the off-mound profile window. Micromorphological soil samples (10465-MM025 to MM029) were collected from each of the lettered horizons above, for future analysis. Associated excavation photos include Black Camera 134-6370 to 6615 (Lot 9D-7, top); 135-6622 to 6629 (Lot 9D-7, bottom; Lot 9D-8, top); 136-6630 to 6640 (Lot 9D-8, bottom; Lot 9D-9, top); 140-6737 to 7082 (Lot 9D-9, bottom).

Conclusions. ALA-002A is a possible terraced building platform. We exposed the severely slumped lower terrace, consisting of a four-to-six-course ashlar facing that contained the earthen construction core, and a possible upper terrace, albeit of slumped and toppled courses still in alignment. Based on the presence of daub, we can assume a perishable superstructure once stood atop the platform. Residents built the platform on a tamped, sandy occupation surface. A ~3 cm carbon layer was encountered directly atop the occupation surface, immediately below the platform, possibly part of construction preparation and/or associated ritual activities. Regardless of how it was constructed, construction occurred during the late facet of the Late Classic. We also encountered a possible Early Classic occupation horizon approximately 40 cm below the platform-related occupation horizon. Therefore, we may have an initial occupation in this area in the Early Classic (pre-600 AD) followed by an abandonment event and sediment accumulation (possible flooding), then reoccupation and construction in the late facet of the Late Classic. A significant burning event took place toward the end of the structure's life history.

Archaeologists have previously identified structures located on the east side of many residential groups as ancestor shrines elsewhere in the Maya world (e.g., McAnany 1995). We have not yet identified such a pattern at Alabama, though it would be possible and might connect populations to those further inland (e.g., Belize River Valley). For now, the only evidence in support of such designation would be that this is the only of the three ALA-002 mounds where we recovered censers. Additionally, we encountered more artifacts within the earthen core of this platform than at any other investigated platform to date at Alabama. This observation perhaps hints at diverse garbage disposal practices associated with different activities or other temporal or identity factors; we will have to examine this in future.

ALA-002B: Suboperations 9E & 9G

The ALA-002B mound is a roughly rectangular-shaped building platform located on the west side of ALA-002. It measures approximately 30 m (N/S) x 15 m (E/W) and is roughly 2.75 m tall. Large trumpet trees grow atop this mound; thus, it was nicknamed Trumpet Hill.

Prior to unit set-up, we chopped and cleared low brush (not trees) and burned grass on the entire mound to get a better sense of mound shape and to locate centrelines and any existing architectural alignments. From this, we could tell that an outset stair existed along part of the east side of the mound. Prior to excavations, the mound was subject to some vandalism/looting: two large granite blocks (likely tread stones of Step 4) were pried loose, and some minor digging occurred in the resulting gap (see Appendix C for details). We decided to include this disturbed area within our test excavation boundaries as it was close to the centreline of the platform.

All excavation units at ALA-002B were oriented 10º E of mN, based on interpreted stair (and overall platform) orientation, which was later found to be correct and ultimately sharing the same orientation as the ALA-002C platform. Suboperation (Subop) 9E was a 3 m (N/S) x 3 m (E/W) unit along the east side (front) of the mound, along the approximate centerline of the mound (stair and platform). It was positioned to capture the bottom steps of the stair, and a small portion of the plaza surface abutting the stair. Because we ultimately wanted more plaza area captured, we extended into Subop 9G: a 3 m (N/S) x 1.5 m (E/W) unit attached to the east end of Subop 9E. Excavations aimed to provide the first formal documentation of an intact and relatively undisturbed stair section in the Alabama settlement zone, and to collect data for dating and characterizing both construction and use. Based on Op 10 results (see Chapter 4, this volume), future excavations will also target the backside (west) of the mound to recover additional habitation debris piles (middens).

Associated excavation drawings on file at the Institute of Archaeology in Belmopan include SCRAP2019-DN010 (Figure 3.6), DN011 (Figure 3.7), DN012, DN013, and DN014.

Surface. While clearing away surface litter, we did collect some bulk ceramics (none could be stylistically dated) and one chert shaping flake.

Humus & Habitation Debris I. Because the ALA-002B mound was not subject to any major agricultural clearing or ploughing activity, we encountered an intact humus layer above the fall. Many artifacts were recovered from the humus layer above the stair (Lot 9E-1, on-mound; 558 artifacts), including large pottery sherds, and fewer in the smaller off-mound area (Lot 9G-1; 113 artifacts). Much of the pottery was relatively "crude" and very similar to known Historic Period materials in some regions and Postclassic materials in the Toledo District (see "Undefined Paste Ware" in Chapter 6, this volume). Most artifact material was encountered above the actual stair, separated by lower humus/colluvium/fluvium. Relatively few items were encountered closer to or directly atop the steps; therefore, this material is thought to represent a post-abandonment, Early Postclassic reoccupation of the mound (to be further investigated in future seasons). The presence of large sherds might also suggest "fresh" refuse at the time of deposition (vs. small/heavily eroded materials deposited from elsewhere).

The location of many artifacts on this side of the mound (the front of the platform) was unexpected, unless determined to be ritual in nature (e.g., termination event). The only other comparable context investigated within the settlement would be ALA-047A, where we excavated the front of the platform. Unfortunately, that mound was significantly damaged by ploughing and almost all facing (or possible stair) stones were gone, leaving only the earthen core (Morton et al. 2016). Little to no artifacts were recovered from within the core of the stair/platform or outside at that location. In the monumental core at Str 10, we also excavated an outset stair or ramp and found few artifacts atop or within (Peuramaki-Brown et al. 2018; Chapter 2, this volume).

Once we finished removing the humus, we exposed the tops of a few fallen or root-disturbed granite ashlars (hewn blocks) atop five complete steps with pockets of colluvium/fluvium between each step. In the associated plaza area (off-mound), we exposed the tops of a few fallen blocks in the west end of Subop 9G and the tops of a few rounded (alluvial) cobbles in the east end. In-situ and fallen ashlars from this mound were measured for future standardization studies of granite-block production at Alabama (Table 3.2).

Bulk artifacts recovered include ceramics, daub (both regular and striated; see Peuramaki-Brown et al. 2018:47), and lithic chippedstone debris (phyllite [blocky fragment, unknown and primary flakes], slate [unknown and reduction flakes], quartz [blocky fragments, unknown, primary, and shaping flakes], chert [reduction, shaping, thinning, and finishing flakes], siltstone [blocky fragment]). Small finds included two ceramic mariposas/notched sherds—possible fishing line or net weights (10465-CR003, CR006; Figure 3.8)—which are commonly recovered from Postclassic contexts (MacKinnon 1989:501). The medial segment of a chert thin biface (10465-LT001) was also recovered, along with an unknown chert blade tool (10465-LT002), seven obsidian blade fragments (10465-OB036, OB037, OB038, OB039, OB040, OB050, OB095), percussion and bipolar obsidian flakes (10465-OB041, OB042), a fragment of a barkbeater made of an unknown stone (10465-GS001), and an unknown modified cobble or baton/pestle (10465-OT004). Ceramic materials were stylistically dated to the Late/Terminal Classic (LC) and Early Postclassic (EPC), based on fragments of particular forms of tecomates (LC-TC; e.g., 10465-T006), bowls (EPC; e.g., 10465-T007, T009), jars (LC-TC and EPC; e.g., 10465-T008), thumb-impressed fileting (EPC; e.g., 10465-T005), British Honduras Volcanic Ash bowls (LC-TC), Hondo jars (LC-TC), and Hondo moulded vessels (LC-TC).

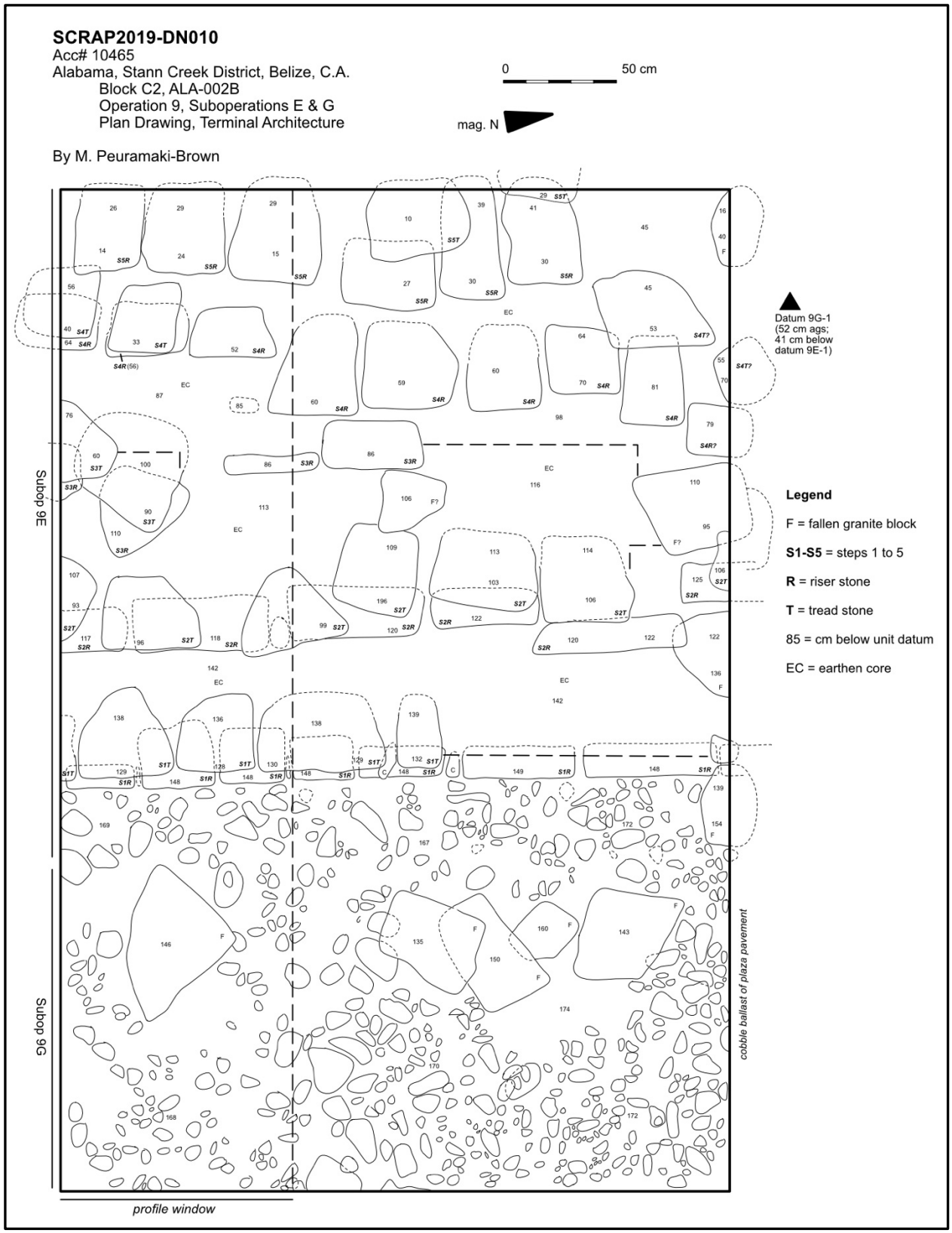

Figure 3.6: Plan drawing of Subops 9E and 9G, terminal architecture at ALA-002B.

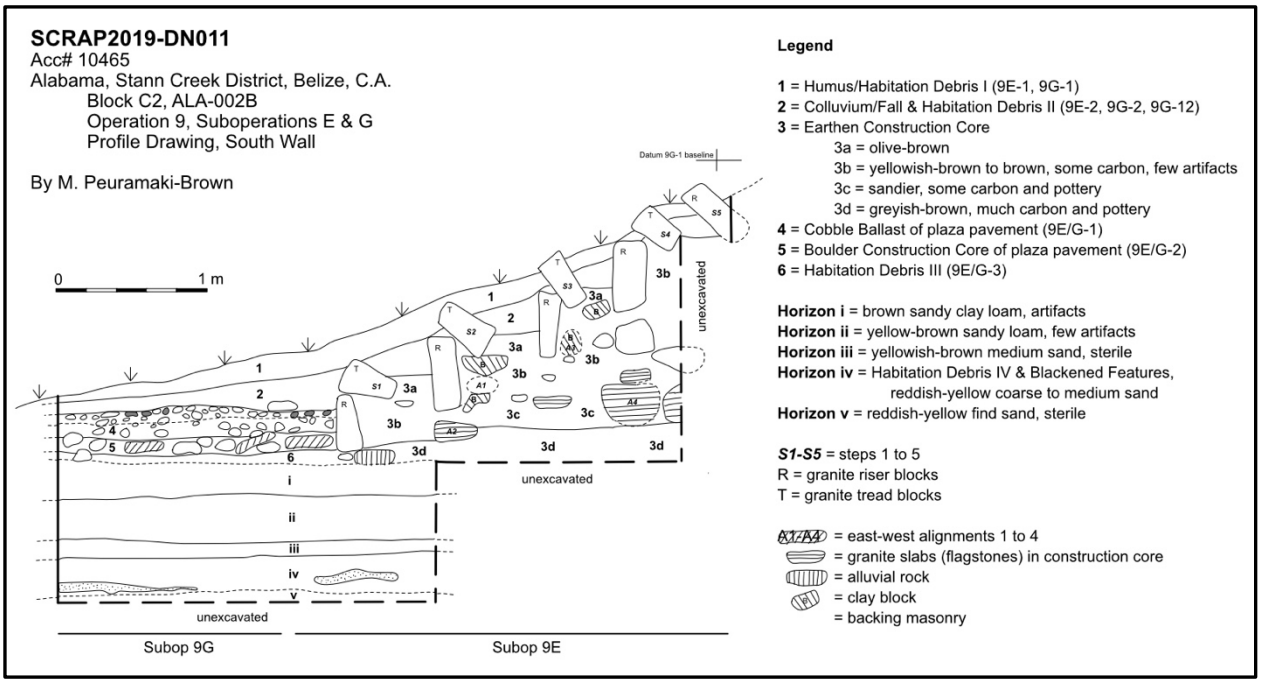

Figure 3.7: Profile drawing of Subops 9E and 9G at ALA-002B.

Associated excavation photos include DB Camera 100-6980, 6989 (Lot 9E-1, top); Black Camera 141-7083 to 7088 (Lot 9E-1, bottom); 143-7090 to 7095 (Lot 9G-1, top); 143-7096 to 7099 (Lot 9G-1, bottom).

Figure 3.8: Ceramic mariposas/notched sherds from humus and fall levels of ALA-002B (L-R: Cat# 10465-CR006 [17 mm wide], CR004 [20 mm wide], CR003 [17mm wide]).

Colluvium/Fall & Habitation Debris II. We removed colluvium/fluvium from directly atop the steps (Lot 9E-2) and the adjacent plaza surface (Lots 9E-2, 9G-2, 9G-12), which likely included a mix of remaining humus and associated Early Postclassic occupation debris, and possibly some earlier on-surface Late to Terminal Classic habitation debris (clear separation was not always possible; future extensive excavations will seek to better separate such materials). We also removed hewn granite blocks that were clearly not in situ (fallen) from both on stair and on the adjacent plaza surface.

We fully exposed five steps (S1 [lowest] to S5 [highest]), each consisting of a riser (vertical stones caped by the tread stones) and tread (single, horizontal stones plus earthen fill behind) (Figure 3.9). While closely examining the granite blocks of the steps, we discovered that

they were fitted together using a mortar composed of clay and crushed granite, as well as wedge-shaped, cobble-sized "chinking." Samples were taken of the mortar for thin sectioning (see Chapter 6, this volume), and wedges were collected when part of the stair was excavated as a profile window along the south side of the excavation units (closest to the calculated centreline; see below).

Figure 3.9: (L-R) exposed terminal stair; chinking between riser stones; S1 riser and tread with "clay block" basal backing masonry; S1 riser and tread with stone basal backing masonry.

We exposed the alluvial cobbles of the plaza surface/ballast in all the off-mound area (see full description of plaza stratigraphy below in Subop 9F). As we followed the cobble ballast toward the stair, we discovered much of the S1 riser was covered by the plaza; therefore, the stair and platform were constructed prior to the terminal plaza surface. We determined that the plaza may have once been surfaced with a yellowish tamped clay atop the ballast, preserved and lipping up slightly against the S1 riser at about the ¾ mark of its height, though this remains unclear and not necessarily logical, as a cobble surface would allow for better drainage (see Chapter 4, this volume). Again, far more artifact material was recovered from on-stair than on-plaza.

Bulk artifacts included ceramics, daub, and lithic chippedstone debris (phyllite [unknown and tertiary flakes], slate [unknown flakes], slate [unknown and secondary flakes], quartz [tertiary flake], chert [reduction, bifacial reduction, and finishing flakes], quartzite [bifacial reduction flake]). Small finds included another ceramic mariposa/notched sherd (10465-CR004), presence of which suggests a continuation of the artifact deposits from the humus in some areas, and the medial fragment of a chert thin biface. We also recovered three obsidian blades (10465-OB048, OB049, OB057), an obsidian-core rejuvenation flake (10465-OB058), a possible granite mano fragment (10465-GS013), and an unknown modified cobble or adze (10465-OT005). Two carbon samples were collected from beneath slumped stones of the S5 tread (10465-CB036) and riser (10465-CB037); the former was found to be a burned cohune nut and returned a historic date of cal AD 1642–1679 (47.9%; cal AD 1764–1800 [38.8%]; > cal AD 1939 [8.7%]) and the latter returning a date of cal AD 653-715 (79.7%; cal AD 744-765 [15.7%]). Ceramics were stylistically dated to the Late Classic to Early Postclassic based on fragments of Mount Maloney Black bowls (LCII or LCIII/TC), a McRae Impressed notched apron (TC), carved British Honduras Volcanic Ash (LC-TC), a Hondo hollow oven foot (LC-TC), Hondo jars and moulded vessels (LC-TC), tall ring bases (TC-EPC), and various EPC bowl and jar forms.

Associated excavation photos include Black Camera 141-7083 to 7088 (Lot 9E-2, top); 144-7115 to 7313 (Lot 9E-2, bottom); 143-7096 to 7099 (Lot 9G-2, top); 144-7115 to 7313 (Lot 9G-2, bottom; Lot 9G-12, top); 154-7638 to 7844 (Lot 9G-12, bottom).

Profile Window into Plaza & Occupation Horizon. In a 1 m-wide profile window along the south side of excavations, we excavated into the plaza ballast to investigate its relationship to

the stair and strata below. Note the horizon numerals only signify stratigraphic position from top (i) to bottom (v).

Plaza Ballast consisted of alluvial cobbles, which we removed (Lot 9E/G-1) to expose the base of the bottom step/riser (S1) of the stair, which sits lower than the terminal plaza surface. We exposed larger cobbles, boulders, and granite slabs (flatter pieces, similar to Subop 9F below) construction core below the ballast, with the S1 riser continuing below. Bulk artifacts included ceramics, daub, and lithic chippedstone debris (phyllite [unknown flake], chert [reduction flake]). Small finds included an obsidian blade fragment (10465-OB066). Ceramic materials could not be stylistically dated. Associated excavation photos include Black Camera 144-7115 to 7313 (top) and 146-7394 to 7401 (bottom).

Plaza Construction Core consisting of alluvial large cobbles, boulders, and granite slabs was removed as Lot 9E/G-2. The risers were found to continue below this into a brown sandy clay loam horizon (possible pre-plaza habitation debris and occupation horizon). Bulk artifacts recovered include only 11 ceramic sherds, with some rim fragments stylistically dated to the Late/Terminal Classic. Associated excavation photos include Black Camera 146-7394 to 7401 (top) and 146-7402 to 7408 (bottom).

Habitation Debris III consisted of brown sandy clay loam and horizontally laying ceramics beneath the plaza construction core, which was excavated as Lot 9E/G-3. The S1 riser, along with an unfired clay "block" found immediately behind and slightly below, continued ~10 cm into this context and is associated with the overall brown sandy clay loam to clay loam horizon (occupation horizon, same as at ALA-002C). This habitation material may also be associated with an earlier construction within the stair (see Lots 9E-20 and 9E-22 below). Only bulk ceramics were recovered from this lot and were stylistically assigned to the Late/Terminal Classic based on a jar form. One carbon sample (10465-CB044) was recovered and was dated to cal AD 659–722 (68.5%; cal AD 741–768 [26.9%]). Associated excavation photos include Black Camera 146-7402 to 7408 (top) and 147-7427 to 7438 (bottom).

Horizon i (occupation horizon; artifacts present) was excavated (east to west) in Lots 9G-8, 9G-3, 9E-14, 9E-17, immediately beneath the formal plaza and Habitation Debris III. This is a brown clay loam to sandy clay loam that continued to produce some artifacts and was followed under Step 1. The matrix became slight sandier and yellower toward the bottom of associated lots, which is when we changed lots. Bulk artifacts included ceramics, daub, and lithic chippedstone debris (slate [unknown flakes], phyllite [primary flake], quartz [primary flakes]). An obsidian blade fragment (10465-OB-081) and an obsidian-core rejuvenation flake (10465-OB082) were recovered. No ceramics could be stylistically dated. One carbon sample (10465-CB045) was recovered and dated to cal AD 345-442 (69.0%; cal AD 261-276 [3.9%]; cal AD 448-479 [8.6%]; cal AD 493-535 [14.7%]). Associated excavation photos include Black Camera 147-7427 to 7438 (Lots 9G-3, 9G-8, top; 9E-14, top east end); 150-7552, 7553, 7555 (Lot 9G-3, bottom); 154-7628 to 7630 (Lot 9G-8, bottom); 148-7475 to 7482 (Lot 9E-14, top west end; Lot 9E-17, top); 152-7597 to 7602 (Lot 9E-14, bottom); 153-7615 to 7617 (Lot 9E-17, bottom).

Horizon ii (few artifacts) was excavated (east to west) in Lots 9G-9, 9G-4, 9E-15, 9E-18, beneath the formal plaza and Step 1. This is a sandier matrix than Horizon i, described as a sandy loam, with a lighter yellow-brown colour, and few artifacts. The matrix became slightly redder and even sandier toward the bottom of the lots, with some small pebbles and coarser sand (rounded/alluvial), so we changed lots. Bulk artifacts include ceramics, daub, and lithic chipped-stone debris (slate [unknown flake]). One of the ceramic sherds was of a Late/Terminal Classic jar form. Associated excavation photos include Black Camera 150-7552 to 7555 (Lot 9G-4, top); 151-7560 to 7564 (Lot 9G-4, bottom); 154-7628 to 7630 (Lot 9G-9, top); 154-7631 to 7636 (Lot 9G-9, bottom); 152-7597 to 7602 (Lot 9E-15, top); 152-7603 (Lot 9E-15, bottom); 153-7615 to 7617 (Lot 9E-18, top); 153-7618 to 7620 (Lot 9E-18, bottom).

Horizon iii (sterile) was excavated (east to west) in Lots 9G-10, 9G-5, 9E-16, 9E-19, beneath the formal plaza and Step 1. The latter two lots include some mixing with lower Horizon iv. It consisted of a yellowish-brown sand (medium coarseness) that was sterile (no artifacts). Toward the bottom of the lots, we encountered redder sandy areas—what appeared to be signs of burning—and carbon or unknown blackened sandy matrix in circular, linear, and "swirling" features. We changed lots at this point to investigate further. Associated excavation photos include Black Camera 151-7560 to 7564 (Lot 9G-5, top); 152-7572 to 7576 (Lot 9G-5, bottom); 154-7631 to 7637 (Lot 9G-10, top); 154-7637 (Lot 9G-10, bottom); 152-7603 (Lot 9E-16, top); 152-7604 to 7606 (Lot 9E-16, bottom); 153-7618 to 7620 (Lot 9E-19, top); 153-7621 to 7627 (Lot 9E-19, bottom).

Horizon iv (sterile) was excavated (east to west) in Lots 9G-11 and 9G-6, beneath the formal plaza and Step 1. This consisted of the removal of reddish-yellow, medium to coarse sand from around the blackened features noted above. No artifacts were recovered. Associated excavation photos include Black Camera 152-7572 to 7576 (Lot 9G-6, top); 152-7577 to 7582 (Lot 9G-6, close up on exposed, blackened features); 152-7584 to 7594 (Lot 9G-6, bottom); 154-7637 (Lot 9G-11, top); 154-7638 to 7850 (Lot 9G-11, bottom).

Blackened Features/Habitation Debris IV (three artifacts) were encountered throughout the excavation area beneath the plaza and Step 1, within Horizon iv. In total, 8 features were isolated, with artifacts recovered only in the uppermost and largest of the features, Feature 1. This was excavated as Lot 9G-7. The sand closest to the blackened matrix areas was compact (vs loose sand surrounding) and thought to be full of carbon, but when floated (10465-HF002) was found to just be blackened sand (Figure 3.10). We remain unsure as to why these blackened sand features were hardened, if from fusing due to burning (possibly suggested by red surrounding clays) or some other process. These deposits correlate stratigraphically with the Early Classic deposit at ALA-002A (described above) and other early materials at ALA-002C and ALA-002 Plaza, including burned pottery (described below).

Figure 3.10: (L-R) Close up on one of blackened sand features (bottom of Lot 9G-13); floated sand from Feature 1 (Lot 9G-7).

Bulk artifacts included three ceramic sherds, which could not be stylistically dated. One sherd appeared to be a jar neck and the other had a red-slip on a thin body, though not a waxy ware. A micromorphology sample was collected from one of the lowest features (10465-MM018). Unfortunately, thin sectioning and examination under a petrographic microscope produced no further information, other than confirming the material was blackened sand and possibly burned (based on context). We hope to expose more of these features in future extensive excavations and to subject them to additional examination. For this purpose, we left the lowest, pedestalled features intact below heavy plastic when excavations were backfilled. Associated excavation photos include Black Camera 152-7577 to 7594 (top).

Horizon v (sterile) was excavated (east to west) in Lots 9G-13 and 9E-21, beneath the formal plaza and Step 1. This consisted of the removal of a fine to very fine reddish-yellow sand around and below the deepest blackened features exposed in the area. Due to time constraints, we ended excavations here. In some areas (small pockets) we also hit a lighter coloured (beige-grey) clay horizon, which may be geological parent material; we will need to excavate deeper to examine. No artifacts were recovered. Associated excavation photos include Black Camera 154-7631 to 7637 (Lot 9G-13, top); 155-7868 to 7886 (Lot 9G-13, bottom); 155-7868 to 7876 (Lot 9E-21, bottom).

Profile Window into Stair (Construction Core). In the same 1 m-wide strip along the south side of the excavations, we also excavated into the stair to better understand its construction, potentially retrieve sealed deposits, and to investigate possible earlier phases or other constructions. We excavated four of the five steps, removing each individual step in two to four lots/sections: tread and earthen core behind, riser and earthen core behind, basal "backing" stones and earthen core immediately beneath, and floating stones/alignments further below (or other features). In general, the risers are made of granite ashlars (6-sided rectangular blocks; some verging on 'megalithic') positioned vertically with tread stones that sit atop, made of quadrilateral/triangular-shaped granite stones, with their pointed ends angled slightly down into the earthen fill (improving stability) and facing the next step. This is somewhat similar to stairs at Lubaantun in Toledo (Wernecke 2005:76).

Step 1 (S1) was removed as Lots 9E-3 (tread) and 9E-4 (riser). In removing the tread stones and excavating the earthen core from behind and immediately below them, we found the earthen core became very compact the closer we got to the top of the riser stones. The key to removing riser stones was to dig out the wedge-shaped chinking (both alluvial cobbles and pieces of shaped granite) that ancient builders placed between them, which effectively "locked" the blocks together; otherwise, they could not be moved. They also used a mud/clay mortar between risers (as mentioned above; sample 10465-MM013 collected for thin sectioning). We also found individual small to medium-sized cobbles immediately behind the riser stones (top to bottom), though floating in earthen core material (not a solidly packed "backing masonry"). As we moved down behind the riser stones, the earthen core gradually transitioned in colour and texture from yellowish-brown, sandy clay loam at the top, to brown, sandier clay loam midway down, and then dark-grayish-brown clay loam at the bottom. A 'block' of unfired yellow clay (sample 10465-MM037) was positioned slightly below and immediately behind the base of an S1 riser, along with other basal "backing" stones (see Figure 3.9). It appears to have been used in a way akin to the use of putty to stand up an artifact for photography. This was possibly a stiff clay used to support the base of the southernmost S1 riser stone, which was slightly shorter than the other stones of the S1 riser.

We found much carbon and many artifacts within the lower sections of the earthen core (lowest level of the riser), which may be part of preparation for stair construction atop an occupation surface (Horizon i) or associated with an earlier phase of architecture; however, there were no clear surfaces or alignments to follow at any point. When we viewed Step 2 (S2) in forward profile once all of S1 was removed, we could see additional stones further below the base of the S2 riser stones, floating in the earthen core profile. This was found to be a consistent pattern with the other steps; the stones (rounded or shaped) were often floating in dirt and may be related to the construction process, marking where steps would be placed. This requires further investigation.

Bulk artifacts included ceramics and lithic chippedstone debris (slate [unknown and primary flakes], quartz [tertiary flake]). Two carbon samples were collected—one from the same height as the base of the S2 riser and behind the midpoint of the S1 riser (10465-CB043) and one from behind the base of the S1 riser at the bottom of the lot (10465-CB047); only the former could be dated, coming back as cal AD 400- 537 (95.4%). This was an exciting surprise, possibly suggesting the stair was constructed in the Early Classic; however, pottery from behind the riser was securely dated (stylistically) to the Late/Terminal Classic, based on a flat British Honduras Volcanic Ash base and vase form. This reintroduced a problem noted previously in excavations at ALA-043 (Koster and Peuramaki-Brown 2016:96), where early carbon in earthen construction core occurred alongside Late/Terminal Classic pottery. We believe this has to do with the quarrying of earthen material from borrow pits, which may have "old wood" within (earlier natural or cultural burning activity). This issue is currently being investigated.

Associated excavation photos include Black Camera 147-7440 to 7445 (Lot 9E-3, bottom); 147-7440 to 7445 (Lot 9E-4, top); 147-7455 ("backing" cobbles); 147-7456, 7457 (close-up on stone below S2 risers in profile); 147-7458 (close up on use of wedge-shaped chinking); 147-7459 (chinking and clay mortar); 147-7460 (riser and chinking); 147-7465, 7466 (clay 'block'); 148-7467 to 7474 (S1 in profile with chinking, mortar, backing stones); 148-7475 to 7482 (Lot 9E-4, bottom).

Step 2 (S2) was removed as Lots 9E-5 (tread), 9E-6 (riser), 9E-7 (basal backing stones), and 9E-8 (floating stones below riser). When we removed the S2 riser stones we found an N/S alignment of backing masonry (large cobbles to small boulders; A1 on profile) at the midway point behind the riser, but with a thin layer of mud as a buffer, as well as basal backing stones lower down. We then found another large rock about 10 cm below the base of the S2 riser in N/S alignment with two others (see A2 on profile): these were the "floating" stones viewed in forward profile while excavating S1. This may be part of an earlier construction at this location.

Bulk artifacts included ceramic and one lithic chippedstone piece (unknown slate flake). One obsidian blade fragment (10465-OB072) was also recovered. Ceramics from behind the tread, riser, and at the level of the A2 alignment were stylistically dated to the Late/Terminal Classic, including bowl and jar forms and a Remate Red jar fragment. A carbon sample (10465-CB048) was collected from immediately below the basal backing masonry, but unfortunately was not significant enough in weight for dating. Associated excavation photos include Black Camera 147-7440 to 7445 (Lot 9E-5, top); 148-7496 to 7501 (Lot 9E-5, bottom; Lot 9E-6, top); 148-7502 (riser and chinking); 148-7503 to 7506 (backing masonry); 148-7517 to 7522 (Lot 9E-6, bottom; Lot 9E-7, top); 149-7529 to 7533 (Lot 9E-5, bottom; Lot 9E-8, top); 149-7534 to 7537 (Lot 9E-8, bottom).

Step 3 (S3) was removed as Lots 9E-9 (tread), 9E-10 (riser), and 9E-11 (basal backing stones and below riser). This step was in poor condition compared to S1 and S2, with some missing tread and riser stones in the area of the profile window. Once again, midway down the riser we found an alignment of backing masonry (A3 on profile). This suggests a pattern likely related to construction of the stair, including floating backing masonry at the top of risers (often

small cobbles), with an alignment of backing masonry midway down (larger cobbles and small boulders), and floating backing masonry at the base or foot of the riser (again, small cobbles or large boulders). Significant amounts of carbon began to appear upon removal of the basal backing stones at the same level as the A2 alignment found below the S2 risers.

Bulk artifacts included ceramic, daub, and lithic chippedstone debris (slate [unknown and primary flakes], quartz [tertiary flake]). Small finds included two obsidian blade fragments (10465-OB079, OB080). Two carbon samples were collected from behind the riser (10465-OB049) and beneath the basal backing stones (10465-OB051); only the latter was suitable for dating and returned a date of cal AD 408–539 (95.4%). Ceramics from Lot 9E-9 and 9E-11 (upper and lower extremes) could be stylistically dated to the Late/Terminal Classic based on British Honduras Volcanic Ash and bowl and jar forms, as well as a possible Early Postclassic bowl rim (though this is suspect). The early carbon is likely another example of "old wood" within earthen construction core (an issue we are currently attempting to address via Bayesian modelling at Alabama). Associated excavation photos include Black Camera 144-7115 to 7313 (Lot 9E-9, top); 150-7538 to 7542 (Lot 9E-9, bottom; Lot 9E-10, top); 150-7543 to 7547 (Lot 9E-10, backing masonry); 150-7548 to 7551 (Lot 9E-10, bottom; Lot 9E-11, top); 151-7556 to 7559 (Lot 9E-11, bottom).

Step 4 (S4) was removed as Lots 9E-12 (tread & riser) and 9E-13 (below riser). Only one tread stone remained in the area of the profile window, with no surrounding earthen core. This was related to the aforementioned looting activity. We therefore removed the one tread stone at the same time as the riser stones. Unlike the other steps, no backing masonry was encountered until we found a single boulder (river rolled) behind and slightly below the base of the riser. As we moved down below the riser, the soil became lighter in colour and slightly sandier. Roughly 50 cm below the base of the S4 riser we exposed an alignment of stone (alluvial boulders), resting atop the same surface as the A2 alignment encountered below the S2 riser. We remain unsure if this is an earlier platform within the stair or associated with other Horizon i activity (occupation surface below plaza construction core).

Bulk artifacts included ceramics only, which were stylistically dated to the Late/Terminal Classic based on represented bowl forms. Associated excavation photos include Black Camera 144-7115 to 7315 (Lot 9E-12, top); 151-7565 to 7571 (Lot 9E-12, bottom; Lot 9E-13, top); 152-7595, 7596 (Lot 9E-13, backing masonry just below risers, top half of lot); 153-7607 to 7608 (Lot 9E-13, bottom showing A4 alignment).

A2 and A4 Alignments were excavated as Lots 9E-20 (between) and 9E-22 (behind A4), below the S2 to S4 risers. The goal was to isolate material from a possible early platform below the stair, or material related to activity prior to stair construction. Compared to contexts above, we recovered larger pottery sherds in here and small bits of carbon throughout. We eventually hit a clay loam matrix, which was presumed to represent Horizon i (occupation horizon) below the stair. The amount of pottery removed suggests a possible habitation debris context associated with a penultimate structure or other activity prior to stair construction. The A2 and A4 alignments were mostly of a single course throughout their exposed lengths, though artifacts were encountered below their base. It remains unclear as to what the alignments and associated material represents, requiring more extensive excavation.

Bulk artifacts included ceramics and lithic chippedstone debris (chert [reduction flake]). Small finds included one obsidian blade fragment (10465-OB092). Ceramic materials were stylistically dated to the Late/Terminal Classic, based on solid oven feet, strap handles, a Benque Viejo Polychrome bowl/dish form, a Hondo bowl/dish form, British Honduras Volcanic Ash bowl/dish forms and flat base, and a Dolphin Head bowl/dish form, and a sherd of a tall ring base. One carbon sample was collected (10465-CB054) between the two alignments and returned a date of cal AD 667–776 (95.4%). Associated excavation photos include Black Camera 155-

7851 to 7867 and 7874 to 7876 (Lot 9E-20, bottom); 153-7607 to 7608 (Lot 9E-22, top); 155-7851 to 7876 (Lot 9E-22, bottom).

Conclusions. Stairways are essential connective elements in architecture, and they can be functional, decorative, or both (Wernecke 2015:72). For the ancient Maya and residents of ALA-002, the presence of a stair on one of their dwelling platforms, which included a perishable superstructure atop (signaled by the recovery of daub artifacts), was undoubtedly a sign of wealth or prestige. The construction quality of the stair at ALA-002B is signaled by its relatively well-preserved condition.

ALA-002B artifact materials suggest domestic use, although most habitation debris recovered was associated with an Early Postclassic reoccupation. We assume that future excavations off the backside (west) of the platform will recover additional debris associated with the Late to Terminal Classic occupation when residents built and used the stairs. Excavations at ALA-002A have revealed four potentially distinguishable occupation episodes:

1. An Early Classic occupation (blackened sand features and artifacts), followed by a possible major flooding event that deposited significant sterile (Horizon iii) to mostly sterile (Horizons ii) sediments.
2. A Late/Terminal Classic occupation associated with Horizon i before and after constructing the stair (below the formal plaza).
3. A Late/Terminal Classic occupation associated with (atop) the formal plaza.
4. An Early Postclassic reoccupation of ALA-002B, with a deposit of significant artifact materials atop the stair but separated by a layer of soil.

ALA-002C: Suboperations 9B & 9C

The ALA-002C mound consists of a roughly L-shaped building platform located on the north side (northwest corner) of the ALA-002 settlement site. It measures roughly 20 m east-west along its longest axis, roughly 10 m north-south along its west end (bottom of "L" shape) and is roughly 0.5 m tall. The mound sits amid citrus trees, and thus, has been significantly disturbed by initial clearing and ploughing of the site, and subsequent continuous mowing. Based on shovel test pits in the plaza (Op 10, Chapter 4) and aerial shots of the group, we know the formal plaza area runs right up to the front (south side) of the platform (interior area of L-shape).

Some clearing of thick grasses was done to get a better sense of overall topography of the mound, though this was made somewhat difficult by the orchard rows running up and over the mound. Prior to unit set-up, we walked along the mound edges to determine if any in-situ, architectural features could be located. We chose a location along the west side of mound to set up our test excavations, where some hewn granite blocks (ashlars) were exposed and possibly in situ.

All excavation units at ALA-002C were oriented 30º E of mN, based on exposed architectural alignments along its west face and interpretation of mound topography (this was later found to be incorrect due to mound disturbance, and the orientation of the facing was likely closer to 10º E of mN). Suboperation (Subop) 9B was a 1 m (N/S) x 2 m (E/W) excavation unit positioned on the west side of the mound, near what was thought to be the NW corner of the platform. The unit was aligned with the exposed facing stones and general topography, and extended downslope with the aim of recovering off-platform debris as well as architectural details. The excavation area was later extended west in Subop 9C, a 1.5 m x 1.5 m unit, to capture additional off-platform space and associated debris.

Associated excavation drawings on file at the Institute of Archaeology in Belmopan include SCRAP2019-DN005 (Figure 3.11), DN006 (Figure 3.12), DN007, and DN008.

Humus/Ploughzone. Lots 9B-1, 9B-2, 9C-1, 9C-2, and 9C-3 made up this context, which included the thin humic layer, ongoing mowzone, and the original ploughzone beneath. The matrix consisted of a dark-brown sandy clay, crisscrossed with shallow roots from the surrounding orchard trees, below a thin leaf-litter, grass, decaying fruit, and other organic material at surface. Tree root disturbance from the orchard trees was notable in the uppermost layer of the excavation and tapered off entirely once out of the ploughzone. Lots located in the west end of excavations were in the exposed area between rows of orchard trees, where matrix was sun baked and much more compact (relative to that upslope beneath the trees) from years of constant agricultural traffic (**mowers, sprayers, etc.)** and direct-sun exposure**.** Tiny flecks of carbon were encountered within excavations and screened material, likely from modern activity.

Two large, hewn granite blocks (ashlars) were encountered in the SW corner of Subop 9B. Ashlars from this mound were measured for future standardization studies of granite-block production at Alabama (Table 3.2). Further clearing around the blocks confirmed the upper portions of the mound were significantly disturbed due to agricultural activity. The concentration of architectural stone in Subop 9B led to our decision to open Subop 9C directly to the west with the intent of locating and securely identifying the intact facing of the platform. We concentrated our efforts on Subop 9C as we uncovered more and more granite blocks, coming down onto presumed fallen or dragged material from higher up. We exposed a clear alignment of granite blocks running roughly north-south, not in perfect alignment with our unfortunately poorly placed unit due to the morphing of topography by plough activity. By the end of excavations in Lot 9C-2, we had exposed the top of the bottom course of what was ultimately the only course to survive in the alignment (at an angle quite different to the unit—not surprising as this is a shorter mound right in the orchard).

Bulk ceramics and lithic chippedstone debris (quartz [unknown, tertiary, and finishing flakes, blocky fragments], slate [unknown flake]) were recovered from this context. Small finds included an obsidian flake (10465-OB008) and blade (10465-OB-006). More artifacts were recovered to the west of the platform facing (off-mound) than to the east (on-mound). Ceramic materials were stylistically assigned to the Late/Terminal Classic based on fragments of bowl forms.

Associated excavation photos include DB Camera 100-5248, 5250 to 5252 (Lot 9B-1, top); 100-5296 (Lot 9B-1, bottom; Lot 9B-2, top); 100-5290 to 5292 (Lot 9B-2, bottom); 100-5294 to 5296, 5325, 5329, 5331 (Lot 9C-1, top); 100-5298 to 5300, 5336, 5338, 5339 (Lot 9C-1, bottom; Lot 9C-2, top); 100-5304 to 5306, 5352, 5353 (Lot 9C-2, bottom; Lot 9C-3, top); 100-5358, 5360, 5361 (Lot 9C-3, bottom).

Colluvium/Fall (Looters' Backdirt). These excavations suffered the most damage during the vandalism/looting episode mentioned above (see Appendix C for full report). Most blocks in the east end of Subop 9C (the platform facing) were removed—pried out with a large pole—and a hole was dug into the southeast corner of Subop 9C, roughly 20 cm down in the off-mound area before individual(s) gave up (dug either with pole or machete). Backdirt from looting—mostly fall/colluvium material—was cleared out and screened (Lot 9C-4) and photographs taken. Bulk artifacts recovered included non-diagnostic ceramic sherds and two obsidian blade fragments (10465-OB011, OB012). Associated excavation photos include DB Camera 100-5429 to 5456.

Colluvium/Fall. Intact fallen materials were encountered below the ploughzone throughout the units, both on-mound (Lot 9B-3) and off (Lots 9C-5, 9C-6). Fallen blocks along the north side of the units in the off-mound area allowed us to interpret a four-to-five course

facing was once present as the exterior of the platform (all that remained in-situ prior to looting was the bottom course). This interpretation was also based on a toppled stack of four cut stones preserved in the north wall of the units. Carbon flecks were found throughout much of the off-mound area.

An increase in artifacts was noted toward the bottom of Lot 9C-6 close to the platform, many of which were lying horizontally, so we decided to switch lots as we were likely coming into habitation debris atop an occupation horizon near the base of the platform. We also noticed a marked reduction in the number of artifacts appearing in the west half of Lot 9C-6, further away from the platform.

Bulk artifacts recovered include ceramic and lithic chippedstone debris (chert [utilized, shaping, and thinning flakes], quartzite [reduction flake], quartz [blocky fragment]). Small finds included an obsidian blade fragment (10465-OB015). A possible Early Classic bowl fragment was recovered, but no other diagnostic forms/types were identified.

Associated excavation photos include DB Camera 100-5375 to 5377 (Lot 9B-3); 100-5473 (Lot 9C-5); 100-5477, 5479 to 5482 (Lot 9C-6, top); 100-5490, 5494, 5497 to 5499 (Lot 9C-6, bottom).

Construction Core. Due to the nature of effaced, earthen-core construction at Alabama and platform disturbance from agricultural activity, it was difficult to distinguish intact earthen construction core from material above. In previous cases, we determined this through various means including compaction tests (e.g., at ALA-047A, see Morton et al. 2016) or the presence-absence patterning of artifacts (e.g., at ALA-045B, see Pennanen and Peuramaki-Brown 2016), as many construction cores at Alabama contain few to no artifacts. In Lots 9B-4, 9B-5, 9B-6, 9B-7, 9B-8, 9B-9, 9B-10, and 9B-11, relatively few artifacts were recovered, no change in soil texture was observed, and only a slight shift in colour occurred between upper and lower lots. Occasional clusters of cobbles and pebbles were uncovered, and carbon flecks were encountered throughout.

Bulk artifacts recovered included some ceramics and lithic chippedstone debris (chert [blocky fragments, bifacial reduction and finishing flakes], slate [tertiary flake]). Small finds included three obsidian blade fragments (10465-OB019, OB043, OB044) and two flakes (10465-OB020, OB043). One carbon sample (10465-CB019) was collected but was insufficient for dating. Ceramic materials were stylistically assigned to the Late/Terminal Classic based on fragments of Hondo bowls/dishes and other jar types. A sherd with a thumb-impressed filet was tentatively assigned to the Early Postclassic (shallow bowl with applique, possible Chaquiste).

Associated excavation photos include DB Camera 100-5552 to 5559 (Lot 9B-5); 100-5560 to 5567 (Lot 9B-6); 100-5672 to 5677 (Lot 9B-7); 100-5708 to 5715 (Lot 9B-8); 100-6640 to 6645 (Lot 9B-9); 100-6651 to 6656 (Lot 9B-10); 100-6702 to 6705 (Lot 9B-11).

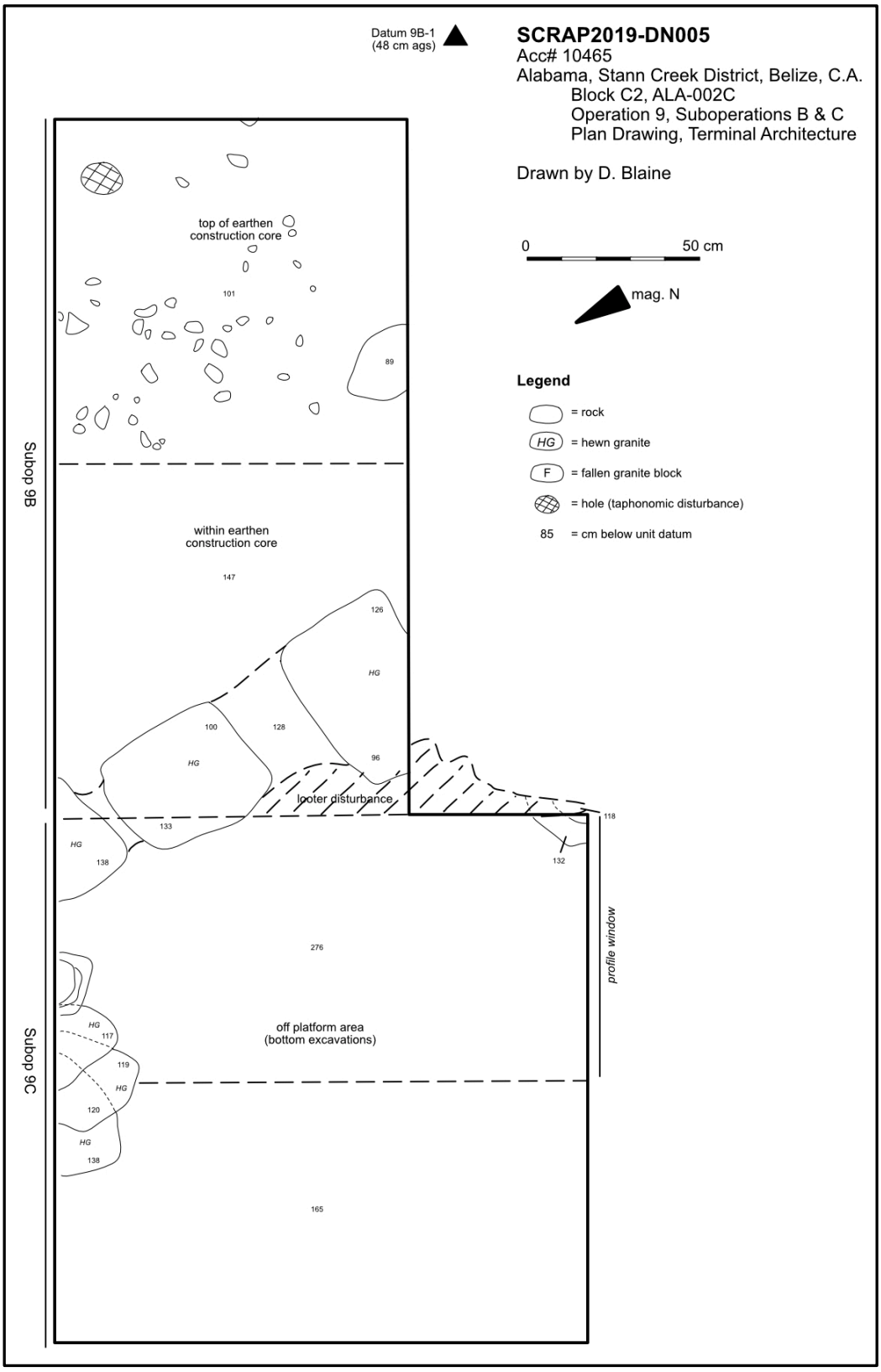

Figure 3.11: Plan drawing of Subops 9B and 9C, terminal architecture at ALA-002C.

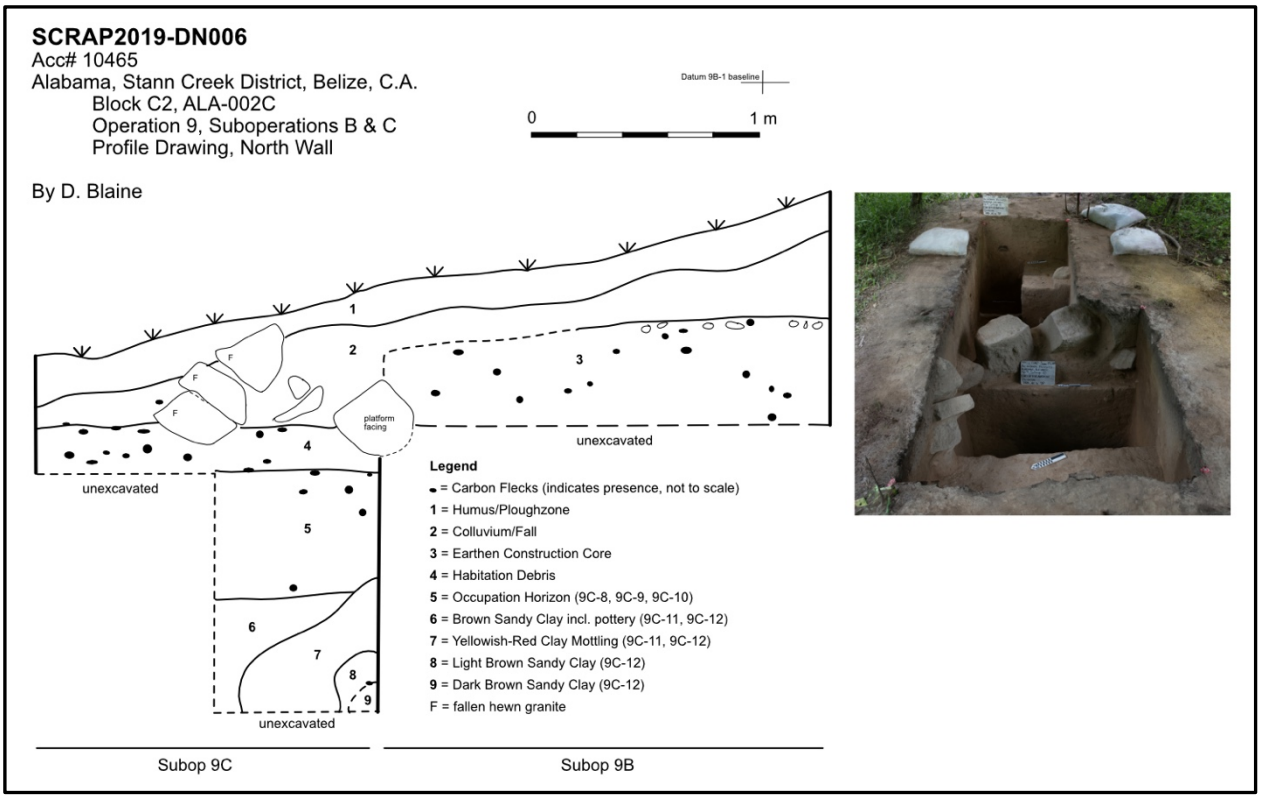

Figure 3.12: Profile drawing of Subops 9E and 9G at ALA-002C.

Habitation Debris/Occupation Horizon (off-mound). A small amount of likely habitation debris was recovered from an area immediately in front of the platform facing (Lot 9C-7), above the occupation horizon. These consisted of ceramic materials laying horizontally. Excavation notes suggest the presence of daub, but none was recorded back in lab; therefore, it is likely misidentification of highly eroded ceramics. Carbon flecks were found throughout. No clear occupation surface could be identified, as at ALA-002A, though it was presumed based on the location of the bottom course of the platform facing.

Bulk artifacts recovered included ceramics, including a Late/Terminal Classic British Honduras Volcanic Ash dish fragment. Two carbon samples were collected (10465-CB009, CB020), though they proved insufficient for dating. Associated excavation photos include DB Camera 100-5723 and 5736 to 5738 (bottom).

Occupation Horizon (profile window, off-mound). We continued down below the level of the bottom course of the platform face in the off-mound area (below the habitation debris) in Lots 9C-8, 9C-9, and 9C-10, as part of the Occupation Horizon (surface atop of which the platform was constructed), intending to hit a sterile lot and the end of our test excavations. This was in a profile window measuring 1.5 m (N/S) x 0.75 m (E/W) on the east side of Subop 9C. Matrix texture remained a brown sandy clay throughout, except for the appearance of yellowish-red clay mottling along the south side of the excavations, starting in Lot 9C-9 and ultimately continuing to the bottom of our excavations. Such mottling may be associated with water activity in the area, or repeated wetting and drying action. A transition into a yellowish-brown sandy clay was noted toward the bottom of Lot 9C-10. The appearance of tiny white inclusions (possibly quartzite coarse sand and tiny pebbles/gravel, ~1 cm diam) throughout the excavation area also appeared at this time, and it was determined we were encountering a new matrix horizon and switched lots.

A few bulk artifacts were recovered in this ~60 cm thick context, including ceramics and lithic chippedstone debris (slate [tertiary flake], chert [bifacial reduction flake, blocky fragment]), with a single sherd encountered in the lowest 20 cm (Lot 9C-10). Ceramic materials from the top 20 cm (Lot 9C-8) were stylistically assigned to the Late/Terminal Classic, based on a single sherd of a Northern Belize-style bowl/dish. Associated excavation photos include Dave Camera 100-6071 to 6074 (Lot 9C-8); 100-6207 to 6210 (Lot 9C-9); 100-6219 to 6223 (Lot 9C-10).

Coarse Sand Horizon. This horizon consisted of a less-compact sandy clay, with coarser sand inclusions than in the matrix described immediately above, including a continuation of the small gravel/pebble inclusions as well as yellowish-red clay mottling. With so few artifacts encountered in the lowest lot of the previous context, we assumed this horizon (Lot 9C-11, 9C-12) would be sterile. Rather, the first 20 cm yielded 20 ceramic sherds and a clear quartz crystal flake (~90 cm below top of occupation horizon). None of the sherds could be stylistically dated, but it is likely this would correlate with the Early Classic material encountered at ALA-002A, the blackened sand and pottery features at ALA-002B, and a burned piece of pottery in the Subop 9F plaza test excavation (see below). The second 20 cm were sterile; due to this and time limits, we ended test excavations at this point. Associated excavation photos include DB Camera 100-6303 to 6311 (Lot 9C-11) and 100-6598 to 6621 (Lot 9C-12).

Conclusions. The lack of daub in these excavations may suggest there was no superstructure atop this platform, or there was one that did not include daub construction (e.g., only wattle). We encountered relatively few artifacts, though shovel test pitting in this area (Op 10, Chapter 4, this volume) did recover areas of greater artifact densities. Future research will target the platform's north side (back) with more extensive excavations, though disturbance from modern agricultural activity is significant in all mound areas. As at ALA-002A, a significant amount of carbon was encountered in the fall/colluvium layer at ALA-002C, possibly related to ultimate structural collapse.

ALA-002 Plaza: Suboperation 9F

The large ALA-002 plaza (~2250 m^2) was investigated as part of both Operation 9 and 10 (see Chapter 4, this volume). Whether this space was purely residential or also had a public function has yet to be determined. The investigation of the space as part of Operation 9 consisted of Suboperation 9F: a 1 m x 1 m test excavation unit, oriented 40º E of mN and positioned toward the centre of the plaza space and roughly in line with orchard rows. The purpose of the excavation was to provide a controlled, stratigraphic excavation and profile of the plaza area to assist with interpretations of ALA-002 development and results of the Op 10 shovel testing program. Illustrations on file with the Institute of Archaeology include SCRAP2019-DN009 (Figure 3.13).

Excavations in Subop 9F confirmed preliminary observations from the Op 10 shovel test pits and a classic three-element construction unit or floor/pavement "system" as described by Littmann (1967), with the following upper stratigraphy (from surface-level, downwards):
Humus/Ploughzone. This was removed as Lot 9F-1. No artifacts were recovered. An intact cobble surface/ballast was exposed throughout the unit. Associated excavation photos include Black Camera 144-7112, 7113 (top), and 144-7331, 7336 (bottom).

Cobble Ballast. This rounded (alluvial/fluvial) cobble and some gravel/pebble-sized material was removed as Lot 9F-2 and represents the ballast of the terminal plaza surface. A surfacing material itself was not found intact in this area but is believed to have been made of

clay based on finds at ALA-002B (described above) or was the cobble surface itself (see Chapter 4, this volume). Only six ceramic sherds were recovered from within this context, with some stylistically dated to the Late/Terminal Classic (Puluacax Unslipped bowl). Associated excavation photos include Black Camera 144-7331 and 7336 (top), and 145-7348, 7357, 7362 (bottom).

Boulder Construction Core. This was removed as Lot 9F-3 and consisted primarily of rounded (alluvial/fluvial) boulder-sized material throughout the unit, serving as a "rough fill" or foundation for the plaza (Wernecke 2005:70). Below this, atop the occupation surface (Horizon I), we found three large, flat granite slabs. Similar slabs were encountered below/within the cobble ballast and boulder construction core throughout Op 10 test pitting, and their functions remain unclear (e.g., just another part of boulder construction core or parts of buried/penultimate architectural alignments atop the occupation surface). Only five ceramic sherds were recovered from this lot, though none could be stylistically dated. Associated excavation photos include Black Camera 145-7348 (top) and 145-7363 (bottom).

Due to time constraints, we opened a 1 m (N/S) x 0.5 m (E/W) profile window to the east of the granite slabs (east side of unit), to continue down into the occupation horizon to sterile, excavating primarily in 20 cm lots as we went. Full descriptions of each horizon matrix can be found in the associated profile drawing. Note the horizon numerals only signify stratigraphic position from top (I) to bottom (VIII).

Occupation Horizon (Horizon I). This (Lot 9F-4) is the surface atop of which the formal plaza was constructed. At roughly 20 cm into lot excavation, we started seeing a slightly lighter-coloured matrix appear (brownish yellow) and shift in texture (sandier). Thirty-four ceramic sherds were recovered from the upper limits of this lot, associated with activity prior to the construction of the terminal/formal plaza (this was also observed in Op 10 test pits). Some of these could be stylistically dated to the Late/Terminal Classic, including particular rim and dish forms. Associated excavation photos include Black Camera 145-7363 (top), and 145-7374, 7376 (bottom).

Lower Horizons. The following horizons were fully noted within the final profile, below the occupation horizon, and represent shifts in colour, texture, and presence of mottling in associated matrixes. The mottling is so pervasive the soil looked red-brown throughout but maintains the olive brown colour. Micromorphological samples were collected from six of the eight horizons (10465-MM019, 020, 021, 022, 023, 024), including Horizon I described above.

- Horizons II/III (Lots 9F-5, 9F-6, 9F-7): One piece of daub was recovered from the top of Lot 9F-5. All lower lots of this context were sterile. Associated excavation photos include Black Camera 145-7374, 7376 (Lot 9F-5, top); 146-7387 to 7393 (Lot 9F-5, bottom; Lot 9F-6, top); 146-7421 to 7424 (Lot 9F-6, bottom; Lot 9F-7, top); 147-7447, 7453 (Lot 9F-7, bottom).
- Horizon IV (Lot 9F-8): This lot was sterile. Associated excavation photos include Black Camera 147-7447, 7453 (top) and 147-7463, 7464 (bottom).
- Horizons V-VIII (Lots 9F-9 [V/VI], 9F-10 [VI/VII/VIII]): A carbon sample (10465-CB046) was collected from Lot 9F-9 (~90 cm below top of Horizon I) but turned out to be a burned piece of pottery with only a fleck of carbon, so it could not be dated; however, this material may be associated with other early/deep deposits elsewhere at ALA-002 and representing a possible buried [Early Classic] occupation. Lot 9F-10 was sterile. Due to time constraints and profile window size relative to excavated depth, we decided to end

excavations here. Associated excavation photos include Black Camera 147-7463, 7464 (Lot 9F-9, top); 148-7492, 7495 (Lot 9F-9, bottom; Lot 9F-10, top); 148-7507, 7513, and 149-7523 to 7528 (Lot 9F-10, bottom).

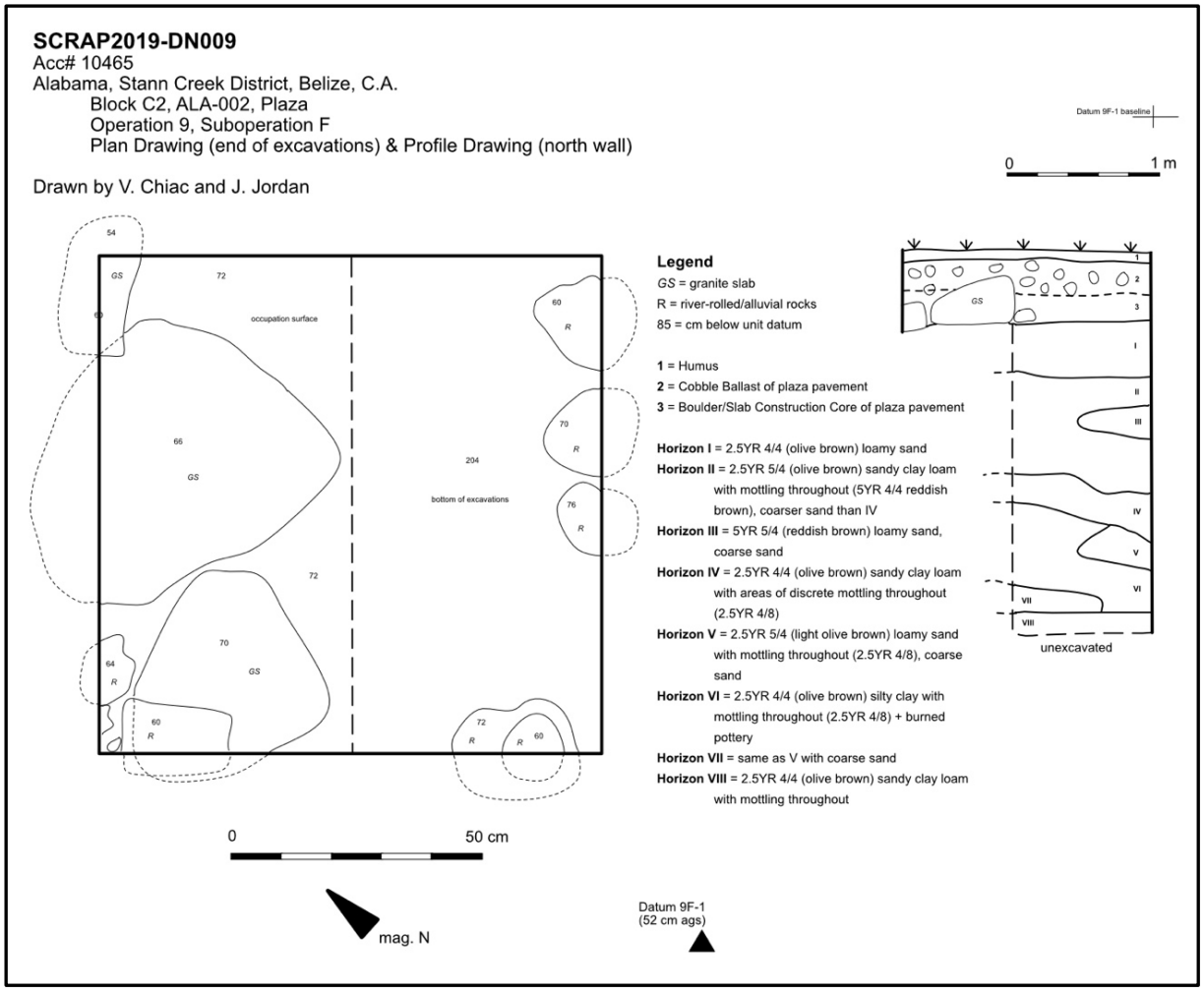

Figure 3.13: Plan and profile drawings of Suboperation 9F in the ALA-002 plaza.

Conclusions. The ALA-002 plaza is a formal construction that was built after ALA-002B, and likely also after ALA-002A and ALA-002C. It is possible this was a water management issue, as the cobble surface/ballast and lower boulder core would allow rapid runoff and an elevated living surface (however slight) in this area where high clay content in soils are common and annual flooding due to seasonal rains are a reality. Construction of the plaza follows the same pattern observed in the East Plaza of Alabama's monumental core (see Chapter 2, this volume). The Late to Terminal Classic occupation surface lies directly below the formal plaza and is associated with penultimate use/occupation debris directly on ground surface (confirmed in Op 10 testing). Additionally, possible Early Classic occupation appears at ~90 cm below the aforementioned Late/Terminal Classic occupation surface, separated by sterile to near-sterile sediments that include prominent mottling, possibly related to significant flooding event(s).

ALA-002 Conclusions

Op 9 excavations at the ALA-002 settlement site provide essential information regarding the largest Type VI settlement site known at Alabama and one of the nearest to the monumental

core. Two of its associated mounds were also minimally disturbed by modern agricultural activity, unlike similar sites as ALA-001 (Block D) and ALA-047 (Block C1; see Peuramaki-Brown et al. 2014). Results of excavations suggest this was home to a relatively elite household at Alabama, with activities encompassing at least domestic and ritual forms.

Evidence exists for a separate Early Classic occupation followed by an extended period of abandonment, possibly due to a significant flooding event. Comparing absolute depths relative to ALA-002's permanent survey monuments, it is apparent that Lots 9G-7 (ALA-002B), 9C-11 (ALA-002C), and 9F-9 (ALA-002 plaza), where the deepest artifacts appeared following seemingly sterile deposits above, differ by only a few centimetres depth relative to the current ground level. Lot 9D-8 (ALA-002A) is more than 1 m lower in absolute terms but was identified at approximately the same depth below the sloping ground surface as were the others. Accepting that all lots together represent a single, coherent, stratigraphic level, then the general slope/aspect of the ancient surface must have been similar to the present.

Reoccupation occurred during the late facet of the Late Classic to Terminal Classic, during which residents constructed the formal terminal architecture of the site. Then the second period of abandonment was followed by a second reoccupation of at least part of the site (ALA-002B) in the Early Postclassic.

Table 3.1: Lot data for all suboperations of Op 9, organized by location (ALA-002A, B, C, Plaza).

Context				Metrics					Matrix Description		
Op	**Subop**	**Lot**	**Designation**	**N/S (m)**	**E/W (m)**	**Area (m2)**	**Avg thick (m)**	**Vol. (m3)**	**Colour**	**Texture**	**Inclusions**
ALA-002A											
9	A	1	Humus	3.00	2.00	6.00	0.22	1.33	7.5YR 3/2 Dark Brown	Sandy Clay Loam to Clay Loam	80% sandy clay loam/clay loam; 20% thin/thick roots
9	A	2	Humus	3.00	1.20	3.60	0.12	0.42	7.5YR 3/2 to 10YR 4/3 Brown	Sandy Clay Loam to Clay Loam to Sandy Loam	80-95% clay loams/sandy loam; 5-20% thin/thick roots
9	A	3	Colluvium/Fall (on mound)	3.00	1.20	3.60	0.17	0.60	10YR 4/2 Dark Grayish Brown	Sandy Clay Loam to Clay Loam	93% sandy clay loam/clay loam; 5% roots; 2% pebbles
9	A	4	Colluvium/Fall (Looters' Backdirt)	3.00	2.00	6.00	0.06	0.35	10YR 4/2 Dark Grayish Brown	Sandy Clay Loam to Clay Loam	93% sandy clay loam/clay loam; 5% roots; 2% pebbles + blocks disturbed by looters
9	A	5	Colluvium/Fall (off mound)	3.00	1.20	3.60	0.31	1.10	10YR 4/2 Dark Grayish Brown	Sandy Clay Loam to Clay Loam	100% sandy clay loam/clay loam
9	A	6	Colluvium/Fall (off mound)	3.00	0.80	2.40	0.25	0.60	2.5Y 3/2 Very Dark Grayish Brown	Sandy Clay Loam	100% sandy clay loam
9	A	7	Fall/Slump/Construction Core (on mound)	1.00	1.53	1.53	0.47	0.72	2.5YR 4/3 Olive Brown	Sandy Clay Loam	100% sandy clay loam
9	A	8	Fall/Slump/Construction Core (on mound)	2.00	1.40	2.80	0.15	0.43	2.5Y 4/4 Olive Brown	Sandy Clay Loam	100% sandy clay loam
9	A	9	Construction Core (Platform)	1.00	0.80	0.80	0.20	0.16	2.5Y 3/3 Dark Olive Brown	Sandy Loam	99.8% sandy loam; 0.2% cobbles
9	A	10	Fall/Habitation Debris (off mound)	3.00	0.80	2.40	0.09	0.21	10YR 3/4 Dark Yellowish Brown	Silty Clay Loam	95% silty clay loam; 5% cobbles and pebbles
9	A	11	Slump/Construction Core (platform)	0.30	0.37	0.11	0.44	0.05	2.5Y 3/3 Dark Olive Brown	Sandy Loam	100% sandy loam

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	A	12	Construction Core (Platform)	0.71	0.50	0.36	0.20	0.07	2.5Y 3/3 Dark Olive Brown	Sandy Loam	100% sandy loam
9	A	13	Construction Core (Platform)	0.71	0.50	0.36	0.16	0.06	10YR 4/2 Dark Grayish Brown	Sandy Loam	100% sandy loam
9	A	14	Slump/Construction Core (platform)	1.50	0.85	1.28	0.30	0.39	10YR 4/4 Dark Yellowish Brown	Sandy Loam	99% sandy loam; 1% pebbles
9	A	15	Slump/Construction Core (platform)	1.50	0.85	1.28	0.19	0.24	10YR 4/2 Dark Grayish Brown	Sandy Loam	95% sandy loam; 5% small cobbles
9	A	16	Construction Core (Platform)	1.25	0.60	0.75	0.14	0.10	10YR 4/2 Dark Grayish Brown	Sandy Loam	100% sandy loam
9	A	17	Construction Core (Platform)	1.25	0.60	0.75	0.19	0.14	10YR 4/3 Brown	Sandy Loam with some Clay	100% sandy loam/clay
9	A	18	Construction Core (Platform)	1.25	0.80	1.00	0.20	0.20	10YR 4/2 Dark Grayish Brown	Sandy Clay Loam	100% sandy clay loam
9	A	19	Construction Core (Platform-Interface)	1.25	0.80	1.00	0.20	0.20	10YR 4/3 Brown	Sandy Clay Loam	100% sandy clay loam
9	A	20	Construction Core (Platform)/Facing	0.75	0.70	0.53	0.16	0.08	10YR 4/3 Brown	Sandy Clay Loam	100% sandy clay loam
9	A	21	Habitation Debris	1.50	1.00	1.50	0.03	0.04	2.5Y 4/2 Dark Grayish Brown	Sandy Loam	99% sandy loam; 1% pebbles
9	A	22	Construction Core (Platform)	0.75	0.70	0.53	0.31	0.16	2.5Y 4/4 Olive Brown (above carbon); 10YR 4/3 Brown (below carbon)	Loamy Sand (above Carbon); Sandy Clay Loam (below carbon)	100% loamy sand/sandy clay loam
9	A	23	Construction Core (Platform)	0.30	0.30	0.09	0.03	0.00	10YR 4/3 Brown	Loamy Sand	100% loamy sand
9	A	24	Carbon Layer/Occupation Surface (Below Platform)	0.30	0.15	0.05	0.16	0.01	2.5Y 4/3 Olive Brown	Loamy Sand to Sandy Clay Loam	100% loamy sand/sandy clay loam
9	A	25	Habitation Debris/Occupation Surface	1.50	1.00	1.50	0.05	0.07	2.5Y 4/4 Olive Brown	Loamy Sand	99% loamy sand; 1% pebbles

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	D	1	Humus	3.00	1.00	3.00	0.16	0.48	7.5YR 3/2 Dark Brown	Sandy Clay Loam to Clay Loam	80% sandy clay loam/clay loam; 20% thin/thick roots
9	D	2	Colluvium/Fall (off mound)	3.00	1.00	3.00	0.14	0.42	10YR 4/2 Dark Grayish Brown	Sandy Clay Loam	93% sandy clay loam; 5% roots; 2% pebbles/small cobbles
9	D	3	Colluvium/Fall (Looters' Backdirt)	3.00	1.00	3.00	0.05	0.14	10YR 4/2 Dark Grayish Brown	Sandy Clay Loam to Clay Loam	93% sandy clay loam/clay loam; 5% roots; 2% pebbles
9	D	4	Colluvium/Fall (off mound)	3.00	1.00	3.00	0.19	0.58	2.5Y 3/2 Very Dark Grayish Brown	Sandy Clay Loam	100% sandy clay loam
9	D	5	Fall/Habitation Debris (off mound)	3.00	1.00	3.00	0.07	0.22	10YR 5/6 Yellowish Brown	Sandy Loam	95% sandy loam; 5% small pebbles
9	D	6	Habitation Debris/Occupation Surface	1.50	1.00	1.50	0.20	0.30	10YR 4/2 Dark Grayish Brown (lighter yellow below)	Sandy Loam	100% sandy loam
9	D	7	Occupation Horizon	1.50	1.00	1.50	0.25	0.38	10YR 4/3 Brown	Sandy Loam	100% sandy loam
9	D	8	Occupation Horizon/Soil Horizons (A, B)	1.50	1.00	1.50	0.31	0.46	2.5Y 5/3 Light Olive Brown to 2.5Y 4/3 Olive Brown	Sandy Loam to Clay Loam	100% sandy loam/clay loam
9	D	9	Soil Horizons (C, D, E)	1.50	1.00	1.50	0.16	0.23	2.5Y 4/4 Olive Brown to 2.5Y 5/3 Light Olive Brown	Sandy Clay Loam to Loamy Sand (much mica)	100% sandy clay loam/loamy sand (smaller sand than previous lot)
9	A/D	1	Habitation Debris (off mound)	1.50	1.90	2.85	0.09	0.25	10YR 4/6 Dark Yellowish Brown	Clay Loam	100% clay loam
ALA-002B											

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	E	0	Surface	3.00	3.00	9.00	0.00	0.00	N/A	N/A	N/A
9	E	1	Humus & Habitation Debris I	3.00	3.00	9.00	0.06	0.52	10YR 3/3 Dark Brown	Sandy Clay Loam	65% sandy clay loam; 15% roots; 10% pebbles; 5% cobbles; 5% land snail shells
9	E	2	Colluvium/Fall & Habitation Debris II	3.00	3.00	9.00	0.14	1.28	10YR 4/3 Brown	Clay Loam	99% clay loam; 1% pebbles
9	E	3	Step 1 (tread & earthen core)	1.00	0.60	0.60	0.23	0.14	2.5Y 4/3 Olive Brown	Sandy Clay Loam	100% sandy clay loam
9	E	4	Step 1 (riser & earthen core)	1.00	0.60	0.60	0.43	0.26	10YR 5/4 Yellowish Brown (top); 10YR 4/3 Brown (midway); 2.5Y 4/2 Dark Grayish Brown (bottom)	Sandy Clay Loam (top); Sandier Clay Loam (midway); Clay Loam (bottom)	100% sandy clay loam/clay loam
9	E	5	Step 2 (tread & earthen core)	1.00	0.70	0.70	0.35	0.25	10YR 4/4 Dark Yellowish Brown to 2.5Y 4/3 Olive Brown	Sandy Clay Loam	100% sandy clay loam
9	E	6	Step 2 (riser & earthen core)	1.00	0.70	0.70	0.15	0.11	10YR 5/4 Yellowish Brown	Sandy Clay Loam	100% sandy clay loam
9	E	7	Step 2 (below riser & backing masonry)	1.00	0.70	0.70	0.19	0.14	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam (sandier than lot 9E-6)	100% sandy clay loam
9	E	8	Step 2 (stones below risers)	1.00	0.70	0.70	0.13	0.09	10YR 5/4 Yellowish Brown	Sandy Clay Loam to Clay Loam	100% sandy clay loam/clay loam
9	E	9	Step 3 (tread & earthen core)	1.00	0.50	0.50	0.18	0.09	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam to Clay Loam	100% sandy clay loam/clay loam
9	E	10	Step 3 (riser & earthen core)	1.00	0.50	0.50	0.37	0.19	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	100% sandy clay loam
9	E	11	Step 3 (below riser & backing masonry)	1.00	0.50	0.50	0.51	0.25	10YR 5/4 Yellowish Brown	Sandy Clay Loam	100% sandy clay loam

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	E	12	Step 4 (tread with no earthen core & riser with earthen core]	1.00	0.40	0.40	0.60	0.24	10YR 5/6 Yellowish Brown	Sandy Clay Loam	100% sandy clay loam
9	E	13	Step 4 (below riser & earthen core)	1.00	0.40	0.40	0.47	0.19	10YR 6/6 Brownish Yellow (top); 10YR 5/6 Yellowish Brown (mottled; bottom)	Sandy Clay Loam (top); Sandier Clay Loam (bottom)	100% sandy clay loam
9	E	14	Occupation Horizon/Horizon i	1.00	0.54	0.54	0.20	0.11	10YR 5/3 Brown	Clay Loam	100% clay loam
9	E	15	Horizon ii	1.00	0.54	0.54	0.29	0.16	10YR 5/6 Yellowish Brown	Sand to Sandy Loam	99.5% sand/sandy loam; 0.5% tiny pebbles
9	E	16	Horizon iii/Horizon iv	1.00	0.54	0.54	0.16	0.09	7.5YR 6/6 Reddish Yellow	Sand	100% sand
9	E	17	Occupation Horizon/Horizon i (below Step 1)	1.00	0.46	0.46	0.20	0.09	10YR 5/3 Brown	Clay Loam	100% clay loam
9	E	18	Horizon ii (below Step 1)	1.00	0.46	0.46	0.25	0.12	10YR 5/6 Yellowish Brown	Sand to Sandy Loam	99.5% sand/sandy loam; 0.5% tiny pebbles
9	E	19	Horizon iii/Horizon iv (below Step 1)	1.00	0.46	0.46	0.25	0.12	7.5YR 6/6 Reddish Yellow	Sand	100% sand
9	E	20	Construction Core (platform, between A2 and A4)	0.70	1.20	0.84	0.09	0.07	10YR 4/4 Dark Yellowish Brown (top); 7.5YR 4/4 Brown (bottom)	Clay Loam to Sandy Clay Loam (top) to Clay Loam (bottom)	100% sandy clay loam/clay loam
9	E	21	Horizon v	1.00	0.95	0.95	0.17	0.17	7.5YR 6/6 Reddish Yellow	Sand (medium/coarse at top to fine/very fine at bottom)	100% sand
9	E	22	A4 Alignment (earthen core/occupation horizon/Habitation Debris III?)	0.70	0.50	0.35	0.58	0.20	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam to Clay Loam	100% sandy clay loam/clay loam

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	G	1	Humus & Habitation Debris I	3.00	1.50	4.50	0.15	0.68	10YR 4/3 Brown	Clay Loam	85% clay loam; 10% pebbles/small cobbles; 5% roots
9	G	2	Colluvium/Fall & Habitation Debris II	3.00	1.50	4.50	0.07	0.30	2.5Y 4/3 Olive Brown	Clay Loam	80% clay loam; 20% small-medium cobbles
9	G	3	Occupation Horizon/Horizon i	1.00	1.00	1.00	0.24	0.24	10YR 4/4 Dark Yellowish Brown	Clay Loam to Sandy Clay Loam	99% clay loam/sandy clay loam; 1% pebbles
9	G	4	Horizon ii	1.00	1.00	1.00	0.26	0.26	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam to Sandy Loam	99% sandy clay loam/sandy loam; 1% small pebbles
9	G	5	Horizon iii	1.00	1.00	1.00	0.15	0.15	10YR 5/6 Yellowish Brown	Sandy Clay Loam (loose) to Sand	99% sandy clay loam/sand; 1% small pebbles
9	G	6	Horizon iv	1.00	1.00	1.00	0.09	0.09	7.5YR 6/6/ Reddish Yellow	Sand to Sandy Loam	100% sand/sandy loam
9	G	7	Sand Feature 1 & Habitation Debris IV ('burned sand' + early pottery)	0.24	0.18	0.04	0.05	0.00	5Y 2.5/1 Black + reddish	Sand (fused?)	100% sand
9	G	8	Occupation Horizon/Horizon i	1.00	0.50	0.50	0.25	0.13	10YR 5/3 Brown	Clay Loam	100% sandy clay loam
9	G	9	Horizon ii	1.00	0.50	0.50	0.27	0.14	10YR 5/6 Yellowish Brown	Sandy Loam	100% sandy loam
9	G	10	Horizon iii	1.00	0.50	0.50	0.14	0.07	10YR 5/6 Yellowish Brown	Sand	100% sand
9	G	11	Horizon iv	1.00	0.50	0.50	0.04	0.02	7.5YR 6/6 Reddish Yellow	Sand	99% sand; 1% small pebbles
9	G	12	Fall & Habitation Debris II (plaza surface)	2.00	1.50	3.00	0.01	0.02	2.5Y 4/3 Olive Brown	Clay Loam	80% clay loam; 20% small-medium cobbles
9	G	13	Horizon v & Sand Features	1.00	1.50	1.50	0.15	0.23	7.5YR 6/6 Reddish Yellow	Sand (medium/coarse at top to fine/very fine at bottom)	95% sand; 5% small pebbles (rounded to subangular)

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	E/G	1	Ballast (plaza)	2.25	2.80	6.30	0.08	0.48	10YR 4/4 Dark Yellowish Brown	Sandy Clay Loam	65% medium-large alluvial cobbles; 20% small cobbles-large pebbles; 10% sandy clay loam; 5% small pebbles
9	E/G	2	Construction Core (plaza)	1.00	1.85	1.85	0.10	0.18	2.5Y 4/3 Olive Brown	Clay Loam to Sandy Clay Loam	80% alluvial boulders and large cobbles; 10% granite slabs; 10% clay loam/sandy clay loam
9	E/G	3	Habitation Debris III (beneath plaza)	1.00	1.85	1.85	0.09	0.17	10YR 4/3 Brown	Sandy Clay Loam	100% sandy clay loam
ALA-002C											
9	B	1	Humus/Ploughzone	1.00	2.00	2.00	0.14	0.28	7.5YR 3/4 Dark Brown	Sandy Clay	83% Sandy Clay; 10% root; 5% pebbles; 2% cobbles
9	B	2	Ploughzone	1.00	2.00	2.00	0.10	0.20	7.5YR 3/4 Dark Brown	Sandy Clay	88% Sandy Clay; 5% root; 5% pebbles; 2% cobbles
9	B	3	Colluvium/Fall (on mound)	1.00	0.50	0.50	0.21	0.11	7.5YR 3/4 Dark Brown	Sandy Clay	80% Sandy Clay; 5% root; 10% pebbles; 5% cobbles
9	B	4	Fall/Construction Core (platform)	1.00	0.70	0.70	0.08	0.05	7.5YR 3/4 Dark Brown	Sandy Clay	83% Sandy Clay; 2% root; 10% pebbles; 5% cobbles
9	B	5	Fall/Construction Core (platform)	1.00	0.30	0.30	0.32	0.09	7.5YR 3/4 Dark Brown	Sandy Clay	80% Sandy Clay; 5% root; 10% pebbles; 5% cobbles
9	B	6	Fall/Construction Core (platform)	1.00	0.50	0.50	0.12	0.06	7.5YR 3/4 Dark Brown	Sandy Clay	70% Sandy Clay; 5% root; 20% pebbles; 5% cobbles

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	B	7	Fall/Construction Core (platform)	1.00	0.50	0.50	0.21	0.11	7.5YR 3/4 Dark Brown	Sandy Clay	60% Sandy Clay; 5% root; 25% pebbles; 10% cobbles
9	B	8	Fall/Construction Core (platform)	1.00	1.00	1.00	0.19	0.19	7.5YR 4/6 Strong Brown	Sandy Clay	65% Sandy Clay; 5% root; 25% pebbles; 5% cobbles
9	B	9	Construction Core (platform)	0.50	1.00	0.50	0.23	0.12	7.5YR 3/4 Dark Brown	Sandy Clay	80% Sandy Clay; 5% root; 10% pebbles; 5% cobbles
9	B	10	Construction Core (platform)	0.50	1.00	0.50	0.20	0.10	7.5YR 4/6 Strong Brown	Sandy Clay	85% Sandy Clay; 5% root; 10% pebbles
9	B	11	Construction Core (platform)	0.50	1.00	0.50	0.12	0.06	7.5YR 4/6 Strong Brown	Sandy Clay	85% Sandy Clay; 5% root; 10% pebbles
9	C	1	Humus/Ploughzone	1.50	1.50	2.25	0.10	0.23	7.5YR 3/4 Dark Brown	Sandy Clay	79% Sandy Clay; 5% root; 15% pebbles; 1% cobbles
9	C	2	Ploughzone	1.50	1.50	2.25	0.05	0.11	7.5YR 3/4 Dark Brown	Sandy Clay	79% Sandy Clay; 5% root; 15% pebbles; 1% cobbles
9	C	3	Ploughzone	1.50	1.50	2.25	0.26	0.59	7.5YR 3/4 Dark Brown	Sandy Clay	68% Sandy Clay; 7% root; 15% pebbles; 10% cobbles
9	C	4	Colluvium/Fall (Looter's Backdirt)	1.50	1.50	2.25	0.04	0.10	7.5YR 3/4 Dark Brown	Sandy Clay	79% Sandy Clay; 1% root; 15% pebbles; 5% cobbles
9	C	5	Colluvium/Fall (off mound)	1.50	1.50	2.25	0.29	0.64	7.5YR 3/4 Dark Brown	Sandy Clay	75% Sandy Clay; 5% root; 15% pebbles; 5% cobbles

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	C	6	Colluvium/Fall (off mound)	1.50	1.50	2.25	0.06	0.14	7.5YR 4/6 Strong Brown	Sandy Clay	69% Sandy Clay; 1% root; 15% pebbles; 15% cobbles
9	C	7	Habitation Debris/Occupation Horizon	1.50	0.75	1.13	0.25	0.28	7.5YR 4/6 Strong Brown	Sandy Clay	69% Sandy Clay; 1% root; 25% pebbles; 5% cobbles
9	C	8	Occupation Horizon	1.50	0.75	1.13	0.19	0.22	7.5YR 4/4 Brown	Sandy Clay	74% Sandy Clay; 1% root; 20% pebbles; 5% cobbles
9	C	9	Occupation Horizon	1.50	0.75	1.13	0.17	0.19	7.5YR 4/4 Brown	Sandy Clay	80% Sandy Clay; 20% pebbles (5% Quartzite)
9	C	10	Occupation Horizon	1.50	0.75	1.13	0.18	0.21	7.5YR 4/4 Brown (North side of Lot) - 5YR 4/6 Yellowish Brown (South side)	Sandy Clay	75% Sandy Clay; 25% pebbles (5% Quartzite)
9	C	11	Coarse Sand Horizon	1.50	0.75	1.13	0.19	0.21	7.5YR 4/4 Brown	Sandy Clay	80% Sandy Clay; 20% pebbles (5% Quartzite)
9	C	12	Coarse Sand Horizon	1.50	0.75	1.13	0.21	0.24	7.5YR 4/4 Brown	Sandy Clay	90% Sandy Clay; 10% pebbles (5% Quartzite)
ALA-002 Plaza											
9	F	1	Humus/Ploughzone	1.00	1.00	1.00	0.03	0.03	10YR 4/6 Dark Yellowish Brown	Sandy Loam	87% sandy loam; 8% roots; 5% pebbles/small cobbles
9	F	2	Ballast	1.00	1.00	1.00	0.12	0.12	10YR 5/6 Yellowish Brown	Sandy Loam	65% cobbles; 20% pebbles; 10% sandy loam; 5% roots

Context				Metrics					Matrix Description		
Op	Subop	Lot	Designation	N/S (m)	E/W (m)	Area (m2)	Avg thick (m)	Vol. (m3)	Colour	Texture	Inclusions
9	F	3	Construction Core	1.00	1.00	1.00	0.08	0.08	10YR 4/4 Dark Yellowish Brown	Sandy Loam	55% boulders; 30% cobbles; 20% sandy loam; 5% roots
9	F	4	Occupation Horizon (Horizon I)	1.00	0.50	0.50	0.21	0.10	10YR 5/6 Yellowish Brown	Sandy Clay Loam	99% sandy clay loam; 1% pebbles
9	F	5	Horizons II/III	1.00	0.50	0.50	0.20	0.10	10YR 6/6 Brownish Yellow	Loamy Sand	100% loamy sand
9	F	6	Horizons II/III	1.00	0.50	0.50	0.08	0.04	5YR 5/4 Reddish Brown	Sandy Clay Loam	100% sandy clay loam
9	F	7	Horizon II	1.00	0.50	0.50	0.17	0.09	5YR 4/4 Reddish Brown	Sandy Clay Loam	100% sandy clay loam
9	F	8	Horizon IV	1.00	0.50	0.50	0.15	0.08	2.5YR 4/6 Red and mottling of 2.5YR 3/6 Dark Red	Sand and Clay	80% clay; 20% sand
9	F	9	Horizons V/VI	1.00	0.50	0.50	0.20	0.10	10YR 7/1 Light Gray	Sandy Loam	96% sandy loam; 4% pebbles
9	F	10	Horizons VI/VII/VIII	1.00	0.50	0.50	0.24	0.12	2.5YR 5/6 Red	Sand	90% sand; 10% small pebbles

Table 3.2: Measurements of ashlars from ALA-002

Block/ Ashlar	Context	Material	Count (n)	length (cm)	width (cm)	height (cm)	volume (cm3)	Triangular?
ALA002A-1	Facing	granite	1	33	13	20	8580	unknown
ALA002A-2	Facing	granite	1	31	13	25	10075	unknown
ALA002A-3	Facing	granite	1	37	32	23	27232	unknown
ALA002A-4	Facing	granite	1	37	38	25	35150	unknown
ALA002A-5	Facing	granite	1	30	29	11	9570	unknown
ALA002A-6	Facing	granite	1	45	31	20	27900	unknown
ALA002A-7	Facing	granite	1	46	32	15	22080	unknown
ALA002A-8	Facing	granite	1	39	23	23	20631	unknown
ALA002A-9	Facing	granite	1	30	28	28	23520	unknown
ALA002A-10	Facing	granite	1	30	27	11	8910	unknown
ALA002A-11	Facing	granite	1	29	29	13	10933	unknown
ALA002A-12	Facing	granite	1	40	26	13	13520	unknown
ALA002A-13	Facing	granite	1	50	38	13	24700	unknown
ALA002A-14	Facing	granite	1	34	30	13	13260	unknown
ALA002A-15	Facing	granite	1	40	30	24	28800	unknown
ALA002A-16	Facing	granite	1	42	28	22	25872	unknown
ALA002A-17	Facing	granite	1	36	32	21	24192	unknown
ALA002A-18	Facing	granite	1	50	45	20	45000	unknown
ALA002A-19	Facing	granite	1	38	25	16	15200	unknown
ALA002A-20	Facing	granite	1	37	30	20	22200	unknown
ALA002A-21	Facing	other	1	21	10	15	3150	unknown
ALA002A-22	Facing	granite	1	36	25	21	18900	unknown
ALA002A-23	Facing	granite	1	30	27	20	16200	unknown
ALA002A-24	Facing	granite	1	40	27	18	19440	unknown
ALA002A-25	Facing	granite	1	40	27	16	17280	unknown
ALA002A-26	Facing	granite	1	25	22	12	6600	unknown
ALA002A-27	Facing	granite	1	34	30	23	23460	unknown
ALA002A-28	Facing	granite	1	30	25	24	18000	unknown
ALA002A-29	Facing	granite	1	56	50	30	84000	unknown
ALA002A-30	Facing	granite	1	34	29	20	19720	unknown
ALA002A-31	Facing	granite	1	30	29	23	20010	unknown
ALA002A-32	Facing	granite	1	50	28	26	36400	unknown
ALA002A-34	Facing	granite	1	38	16	14	8512	unknown
ALA002A-35	Facing	granite	1	38	26	19	18772	unknown
ALA002A-36	Facing	granite	1	28	26	15	10920	unknown
ALA002A-37	Facing	other	1	29	16	18	8352	unknown
ALA002A-38	Facing	granite	1	35	25	20	17500	unknown
ALA002A-39	Facing	granite	1	20	16	12	3840	unknown

Block/ Ashlar	Context	Material	Count (n)	length (cm)	width (cm)	height (cm)	volume (cm3)	Triangular?
ALA002A-40	Facing	granite	1	38	29	23	25346	unknown
ALA002A-41	Facing	granite	1	37	28	16	16576	unknown
ALA002A-42	Facing	other	1	21	10	15	3150	unknown
ALA002A-43	Facing	granite	1	30	30	20	18000	unknown
ALA002A-44	Facing	granite	1	35	30	19	19950	unknown
ALA002A-45	Facing	granite	1	36	32	18	20736	unknown
ALA002A-46	Facing	granite	1	32	28	24	21504	unknown
ALA002A-47	Facing	granite	1	38	30	24	27360	unknown
ALA002A-48	Facing	granite	1	38	35	17	22610	unknown
ALA002A-49	Facing	granite	1	27	26	18	12636	unknown
ALA002A-50	Facing	granite	1	42	29	25	30450	unknown
ALA002A-51	Facing	granite	1	29	27	26	20358	unknown
ALA002A-52	Facing	granite	1	38	27	20	20520	unknown
ALA002A-53	Facing	granite	1	35	22	18	13860	unknown
ALA002A-54	Facing	granite	1	33	27	26	23166	unknown
ALA002A-55	Facing	granite	1	36	16	19	10944	unknown
ALA002A-56	Facing	granite	1	38	27	18	18468	unknown
ALA002A-57	Facing	granite	1	47	39	19	34827	unknown
ALA002A-58	Facing	granite	1	39	29	22	24882	unknown
ALA002A-59	Facing	granite	1	41	31	21	26691	unknown
ALA002B-1	S1, tread	granite	1	40	40	23	36800	yes
ALA002B-2	S1, tread	granite	1	35	30	20	21000	yes
ALA002B-3	Fallen-step	granite	1	48	48	20	46080	no
ALA002B-4	Fallen-step	granite	1	42	35	20	29400	no
ALA002B-5	Fallen-step	granite	1	37	28	17	17612	no
ALA002B-6	S1, riser	granite	1	50	22	10	11000	no
ALA002B-7	S1, riser	granite	1	46	32	30	44160	no
ALA002B-8	S1, riser	granite	1	45	29	24	31320	no
ALA002B-9	S2, tread	granite	1	45	32	17	24480	yes
ALA002B-10	S2, tread	granite	1	45	34	21	32130	yes
ALA002B-11	S3, tread	granite	1	42	36	22	33264	yes
ALA002B-12	S3, riser	granite	1	37	36	16	21312	no
ALA002B-13	S4, tread	granite	1	33	28	22	20328	yes
ALA002B-14	S4, riser	granite	1	37	36	22	29304	no
ALA002B-15	S4, riser	granite	1	37	33	23	28083	no
ALA002B-16	Fallen-step	granite	1	35	30	28	29400	no
ALA002B-17	Fallen-step	granite	1	47	32	20	30080	no
ALA002B-18	Fallen-step	granite	1	49	28	22	30184	no

Block/ Ashlar	Context	Material	Count (n)	length (cm)	width (cm)	height (cm)	volume (cm3)	Triangular?
ALA002B-19	Fallen-step	granite	1	30	22	15	9900	no
ALA002C-1	Fallen-facing	granite	1	45	40	20	36000	unknown
ALA002C-2	Fallen-facing	granite	1	37	30	29	32190	unknown
ALA002C-3	Fallen-facing	granite	1	38	30	20	22800	unknown
ALA002C-4	Fallen-facing	granite	1	43	36	15	23220	unknown
ALA002C-B1	Facing	granite	1	55	35	30	57750	yes
ALA002C-B2	Facing	granite	1	45	40	33	59400	no
		Total	**83**					
		Average		**38**	**29**	**20**	**23345**	

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Chapter 4. The 2019 Settlement Investigations at Alabama: Operation 10 Off-Mound Test-Pit Program at ALA-002

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This chapter presents results of excavations of off-mound space associated with the ALA-002 settlement site, located in the modern citrus orchard in the Property Block C2 settlement zone of the Alabama site, approximately 1 km southwest from the monumental core (see Figure 1.3, this volume). ALA-002 is a multi-mound Type VI settlement site comprised of three mounds (buried/deteriorated building platforms) arranged around a large, raised patio/plaza (Peuramaki-Brown et al. 2014:36). Given its size (approximately 2250 m^2) and openness along the southern edge, we have elected to use the term plaza (rather than patio) to describe the formal architecture associated with space between the mounds (Ashmore 1981:49). The excavations described in this chapter, and the previous, augment Phase II settlement testing initiated in 2016 (Koster & Peuramaki-Brown 2016; Morton and Delos Reyes 2018; Morton et al. 2016; Pennanen and Peuramaki-Brown 2016).

The principle aim of Operation 10 (Op 10) was to systematically test the off-mound space associated with ALA-002 (both plaza and non-plaza areas) to identify unobtrusive occupation and activity areas. Using a shovel test pit methodology, excavations were designed to complement Operation 9 (Op 9), which was focused on conducting test excavations at all three mounds that comprise the ALA-002 settlement site, as well as a controlled 'telephone booth' excavation of the plaza (see Chapter 3 of this volume). As all excavations conducted as part of Op 10 were shovel test pits, data was recorded in a notebook using a standardized format, rather than on SCRAP Lot Forms. Each shovel test pit was recorded as a discrete suboperation using a grid coordinate designation. When multiple contexts were encountered within a single test pit, care was taken to separate out artifacts recovered from these different contexts (for example, plaza surface/ballast, construction core [lower fill], and occupation horizon) into discrete lots. This data was then entered into an Excel database. Summaries of Op 10 excavation and artifact data are provided in the sections below. Bulk artifact tallies are presented in Table 4.4 (found at the end of this chapter). All matrix was screened using ¼-inch mesh. Copies of all associated paperwork, drawings, and photos are on file at the Belize Institute of Archaeology. Artifacts are currently in storage in Belize.

ALA-002 Settlement Site, Operation 10

As noted above, Op 10 was designed to test off-mound interstitial areas at ALA-002 (i.e., space between mounds, as well spaces off the back and sides of mounds). The following were goals of Op 10:

1. to clarify the built form of the raised plaza associated with ALA-002.
2. to clarify the construction sequence and developmental chronology of this plaza.
3. to identify the extent of disturbance from modern land use in off-mound space associated with ALA-002.
4. to delineate the spatial extent of the houselot/settlement site by noting the distribution of artifact densities and locating the boundaries of its raised plaza.
5. to collect possible habitation debris from off-mound space and middens associated with mound structures to recover artifacts related to activities that occurred at the locale(s).

6. to note the spatial distribution of artifact classes present at ALA-002 to identify any areas of intensive activity; and,
7. to collect soil and sediment samples for future geochemical testing.

To facilitate these goals, a shovel test pit methodology was chosen as the primary data collection technique, which has been demonstrated to be an effective approach to quickly collect data from a wide areal extent for the purpose of identifying buried architecture, "hidden structures" (i.e., structures that were built of perishable materials and were not constructed on a platform), and cultural features such as refuse deposits (Goldsmith 2006; Peuramaki-Brown 2012; Robin 1999; Stomper 2002). Furthermore, in using these methods, the systematic collection of artifacts and soils from non-mound spaces has allowed for the identification of houselot activity areas (Hutson et al. 2007).

A 5 m x 5 m grid was placed across the ALA-002 settlement site, positioned to capture non-mounded interstitial areas, including spaces approximately 10 to 15 meters off the suspected plaza boundaries, and areas off the backs and sides of associated mounds. A local coordinate system was employed, with each grid point serving as the shovel test pit suboperation designation. Shovel test pits were positioned on each grid point, dug at a consistent 50 cm x 50 cm size, to a depth that primarily ranged from 40 – 70 cm, depending on the encountered matrix; for example, some of the shallower shovel test pits were halted when large boulders were encountered (associated with plaza fill). When these boulders were too large to remove without expanding the size of the excavation area, it was terminated. This systematic strategy was employed to minimize recovery biases that can arise during intentional selection of shovel test pit foci. Furthermore, 50 cm x 50 cm test pits on a 5 m x 5 m grid provided 1% total coverage of non-mounded space associated with ALA-002. The margins of the grid were shot in using a Nikon Total Station DTM-322+ (Figure 4.1).

Contextual data was recorded for each shovel test pit. This data included grid location (which also served as the suboperation designation); total depth of excavation; a matrix description that included the type(s) of soil encountered and its/ their colour(s); and a general overview of the classes of artifacts recovered and their approximate density (Table 4.5 at end of chapter). Field notes were used to capture any unique characteristics of individual shovel test pits; for example, as a formal plaza was encountered (discussed below), field notes from this context recorded characteristics of the construction core and its thickness. When potential features were identified, these were drawn and photographed, and excavation was terminated. Each shovel test pit was photographed at the conclusion of excavation.

In plaza contexts, artifacts were bagged and recorded by contextual association in the field and catalogued in the lab with discrete contextual designations. However, as discussed below, the majority of the artifact assemblage was recovered from an occupation horizon situated below the plaza construction core—very few artifacts were recovered from the surface of the formal plaza or its construction core. When diagnostic artifacts or small finds were recovered *in situ*, relevant contextual data was recorded in the field notes and subsequently included in the laboratory catalogue notes.

In addition to artifacts, 100 ml soil and sediment samples were collected from each test pit. The relative vertical location of each collected sample was contingent on the shovel test pit context; for example, samples from on-plaza test pits were collected from the juncture of the base of the plaza construction core and the underlying occupation horizon. Nevertheless, the depth below the ground surface was recorded for each soil sample taken. Samples were not collected from the surface of the plaza as it was heavily disturbed by both physical (e.g., land clearing, soil movement for drainage ditches) and chemical (e.g., soil enrichments and augmentation) activities related to several decades of modern citrus farming. Soil and sediment

samples from off-plaza test pits were collected starting immediately below the humus, at depths ranging from between 20 and 50 cm below the ground surface, with the majority between 40-50 cm (generally the depth of the artifact-bearing occupation horizon). Samples have not yet been analyzed but have been retained for future soil chemical analysis.

Op 10 excavations at ALA-002 revealed architectural and material remains consistent with domestic sites of greater-than-modest means in the region and further afield, including a large raised formal plaza; daub remains from either perishable superstructures/ features associated with the pre-plaza occupation horizon or deposited as part of the plaza construction process; and habitation debris from the terminal plaza surface and the underlying occupation horizon, and from locations off the front, sides, and backs of domestic structures (mounds). Recovered materials included ceramic sherds from bowls, jars, and serving vessels, obsidian blades and flakes, chippedstone and groundstone debitage, and formal groundstone tools.

Almost all shovel test pits, including those situated off the plaza surface, encountered artifacts. Furthermore, despite the poor preservation of ceramic materials at Alabama due to the highly acidic soils in the region, several of the shovel test pits returned diagnostic ceramics appropriate, both, for defining form/ function and for developing a chronology. Carbon associated with cultural material deposits was also recovered from several shovel test pits (all carbon samples were exported to Canada, and several have undergone analysis/dating at the University of Ottawa's AES AMS Laboratory). The distributions of these cultural materials are discussed below. In addition to cultural materials, other features were identified, including possible primary refuse deposits, a mottled clay and daub feature, and two burn features.

Excavations were supervised by Matt Longstaffe (MSL), with assistance from Higinio Chiac Jr. (HCJ), Sylvestro Chiac (SC), Damacio Sho (DS), and Aaron Tush (AT).

Results

Operation 10 included the placement of 254 shovel test pits across an approximately 4200m^2 area (excluding mounds; Figure 4.1). Of these shovel test pits, 99 encountered the plaza surface, 152 were off plaza, and 3 encountered colluvium/ fall associated with adjacent mounds/ structures. No shovel test pits were placed in the space north of ALA-002A, as this area is a large borrow pit and is surrounded by dense vegetation. Four additional test pits were placed in off-plaza contexts but were terminated near the surface as large tree roots were noted, and we did not wish to inflict unnecessary damage to the orange trees. These four test pits have been excluded from the total tabulation of shovel test pits.

Shovel test pits recovered an assemblage of 3,007 artifacts from the sampling area. The relative density of artifacts recovered from the shovel test pits is shown in Figure 4.2. Recovered artifacts included ceramic sherds, lithic debris and objects, daub, groundstone debris and objects, obsidian, and historic artifacts (Table 4.5). The largest material category was ceramic, with 2,562 sherds recovered from 219 test pits (86.2%) across the sampling area. The next most abundant material class was daub, with 221 artifacts recovered from 38 shovel test pits (17.0%). The recovered lithic assemblage was comprised of 160 artifacts recovered from 74 (29.1%) shovel test pits; this assemblage is primarily comprised of quartz (n=47) and quartzite (n=7) debris and chert debitage (n=29). In total, 38 objects made of obsidian were recovered from 34 shovel test pits (22.1%). A small quantity of groundstone was recovered (n=22) from 15 shovel test pits (5.9%). In addition to miscellaneous raw materials, the groundstone assemblage included several tool fragments and other worked items (these are elaborated on below). Two historic artifacts (iron nails [n=2]) were recovered along with the remains of a wooden post, from one test pit (5N,35W). These historic materials are most likely related to farming activities that occurred

prior to the citrus plantation. Interestingly, ceramics and lithic materials were also recovered from this same highly disturbed shovel test pit.

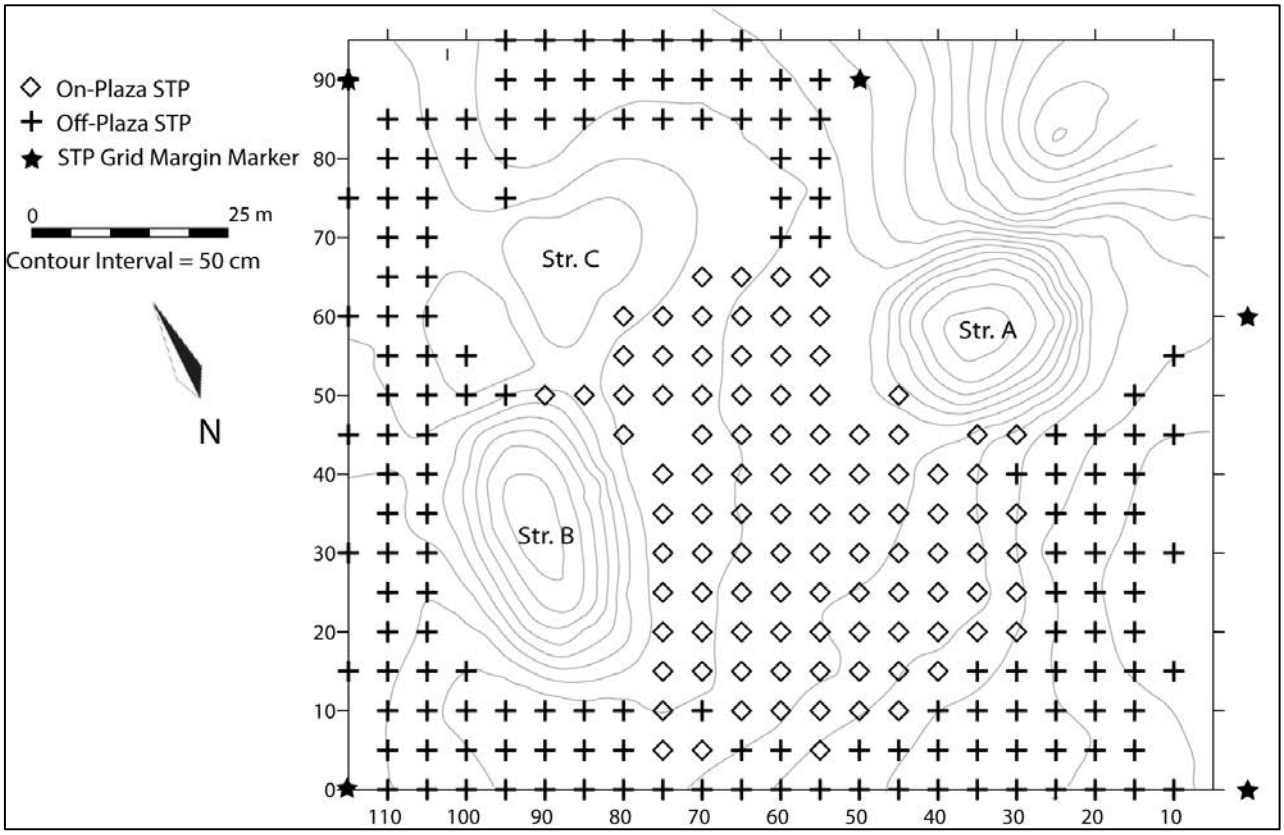

Figure 4.1: Approximate location of Operation 10 shovel test pits.

Plaza versus Off-Plaza Space

The stratigraphy of the shovel test pits fell into two general categories, depending on if the test pits were situated on the plaza or not. Areas off the plaza have been disturbed by activities related to farming and the citrus orchard. The original preparation for the orchard rows involved the removal of trees and overburden through chopping, chaining, and bulldozing, which was then burned and plowed, followed by the placement of drainage channels. Today, the orchard is continually mowed, and various fertilizers and chemicals are regularly applied. Despite these disturbances, a "typical" off-plaza soil column was noted—this is represented by a thin layer of grass and humus, followed by a layer of clay loam between 10-20cm in depth, and then an underlying layer of alluvial sandy clay loam, principally brown to yellowish brown in colour (10YR 5/3 brown to 10YR 5/4 yellowish brown), containing no or very few inclusions (Figure 4.3). Variation from this general pattern was rare. However, when differences were noted, they were typically constrained to the upper-most levels; this was interpreted to represent soil disturbances related to the modern citrus orchard or recent farm activity. Examples include shallow gravel deposits near the surface and soils saturated with motor oil. The underlying alluvial sandy clay loam layer, present at both on- and off-plaza contexts, was artifact-bearing. Most of the cultural materials recovered from Operation 10 came from this alluvial sandy clay loam subsurface context, which is interpreted as an occupation horizon, atop which the main structures and plaza were constructed (see Chapter 3, this volume).

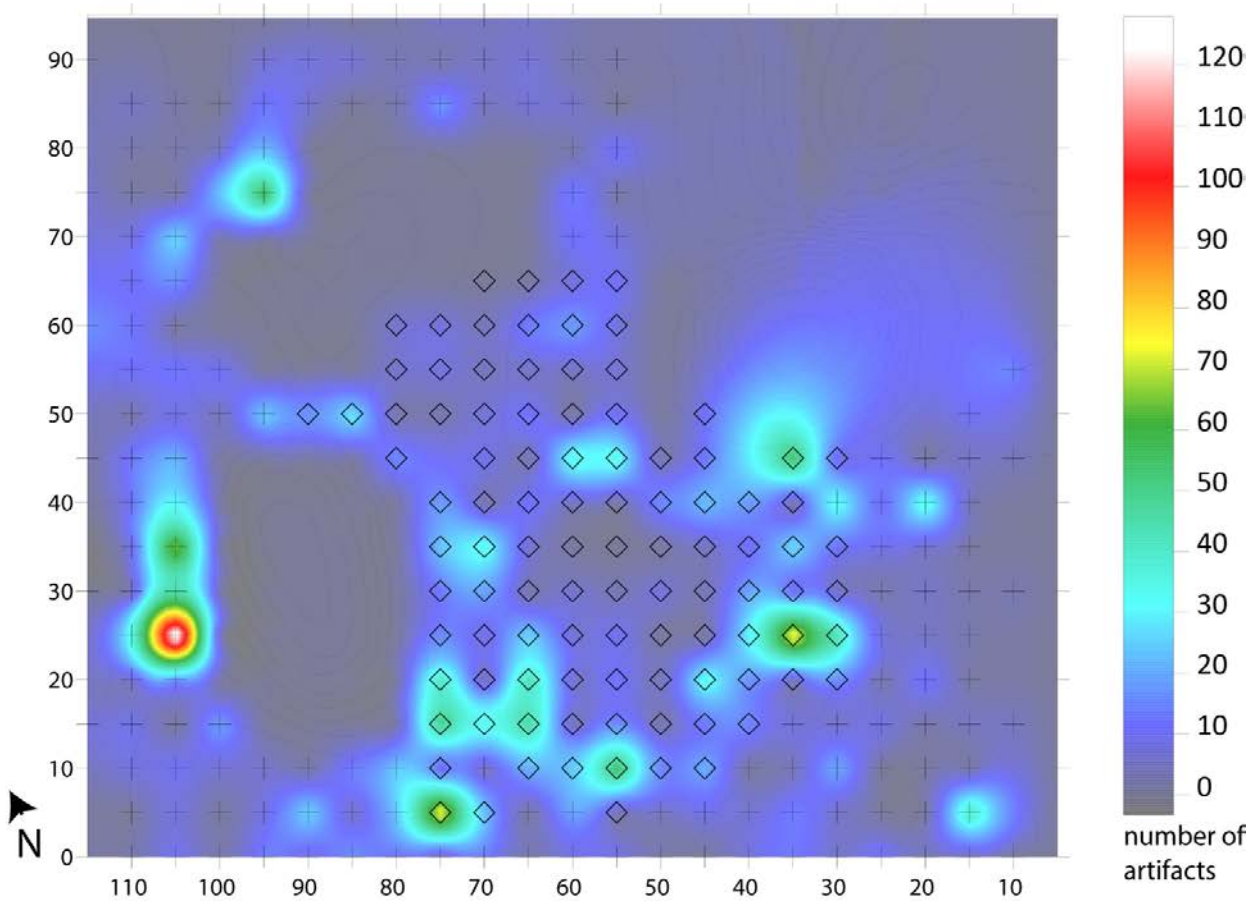

Figure 4.2: Plot of relative density of artifacts recovered from shovel test pits.

On the plaza, a "typical" shovel test pit was represented by a thin layer of grass and humus followed by a thin layer of clay loam approximately 5-15cm in depth. Beneath this matrix was the plaza construction core, which followed a compositional sequence (moving downwards) of pebbles, small to large river cobbles, and occasionally granite blocks or boulders, representing both a plaza surface/ballast and lower "fill" resting atop the sandy clay loam occupation horizon (Figure 4.4). The construction core was between 10 to 35cm thick, depending on if the base was comprised of large cobbles or boulders. Very few artifacts were recovered from the construction core, suggesting the inhabitants of ALA-002 incorporated minimal refuse into its construction. Beneath the plaza construction fill was the artifact-bearing, alluvial, sandy clay loam occupation horizon. A test excavation in the plaza (Op 9 Subop F, see Chapter 3 of this volume) provides detailed documentation of the plaza stratigraphy, as well as the underlying occupation horizon and soil horizons.

Figure 4.3: A "typical" off-plaza shovel test pit soil column.

Figure 4.4: A "typical" on-plaza shovel test pit, showing cobble and boulder base of construction core.

Figure 4.5: Excavated boulder and river cobble construction core.

Activities related to the modern citrus operation and farming, such as tree planting, mechanized plowing, and earth movement to construct drainage ditches, have undoubtedly affected any features close to the present ground surface at ALA-002. These activities, separately or in combination over several decades, have likely destroyed some remains. Very few artifacts were recovered from surface or humus contexts, suggesting these layers have been heavily distributed and artifacts removed and/or destroyed. Fortunately, however, these activities do not appear to have impacted most subsurface features or deposits, including in areas where significant soil has been moved to create drainage ditches (although see discussion on STP 115/ Subop 80N, 60W: Burn Feature #2, below). Apart from the surface, and in some instances the very top of construction fill, the plaza is relatively well preserved. Off the plaza, the artifact-bearing occupation horizon layer appears to be undisturbed.

The plaza at ALA-002 covers an area of approximately 2250 m^2. The type of raised plaza construction seen at ALA-002 is typical for Maya contexts and is also seen in the monumental core (see Chapter 2 of this volume). Builders placed large, unshaped boulders or large cobbles at the base, gradually transitioning to smaller cobbles, bringing the plaza close to its desired height. It was then capped with smaller cobbles and pebbles to serve as a ballast (Houk 2015:28). Interestingly, however, the core contained little to no refuse, and is atypical for Maya construction. This lack of garbage in construction core has been noted at buildings in both the monumental core and settlement of Alabama (Peuramaki-Brown and Morton 2018, 2019). The architects of the plaza at ALA-002 utilized locally available materials, specifically river cobbles and boulders from the nearby creeks and drainages, and often, granite blocks and boulders, as the base of the construction core and edges/ faces of the plaza construction platform (Figure 4.5). The presence of granite at the base of the construction was initially perplexing and interpreted as the remains of buried architecture; however, further testing quickly revealed that granite was

ubiquitous throughout on-plaza shovel test pits and that its presence was related to plaza construction rather than the remains of buried buildings.

Given the lack of limestone at Alabama, it remains unclear what this plaza was surfaced with, if at all, though areas of yellowish tamped clay were located above the ballast near ALA-002B (see Chapter 3, this volume). Cobblestone-surfaced plazas have been documented at Maya sites in the southeastern periphery. Sharer (1978:60) reports that the earliest phases of the Great Plaza of Quiriguá employed a cobble-paved surface, providing access to the earliest stelae. Northeast of Copán in the Paraíso Valley, a cobble-paved plaza is documented at the site of El Cafetal (Canuto and Bell 2017:228). In the Quiriguá periphery, in the absence of plaster, several different floor surfacings have been documented, including pebbles in mud matrix, red clay, crushed-rhyolite, tamped earth, as well as exposed cobbles, rubble, or schist (Ashmore 2007:44).

These types of cobblestone-paved plazas provided good water drainage. Although anecdotal, following a particularly heavy rainfall, shovel test pits situated on the plaza surface were free of water until they reached the alluvial sandy clay loam layer, which was completely saturated. Above, the cobbles appear to have acted as a drain for the plaza—likely a valued feature in a region that receives some of the highest amounts of rainfall in the Maya lowlands.

Ceramics

Two-thousand, five-hundred, and sixty-two sherds (n=2562; 85% of the total ALA-002 plaza artifact assemblage) were recovered from 219 shovel test pits. The density of ceramics from one shovel test pit to the next was variable, ranging from a single sherd (n=21) to the densest test pit, which contained 138 sherds. Over half of the shovel test pits contained 10 or fewer sherds (n=138). The distribution of shovel test pits containing at least one ceramic sherd is presented in Figure 4.6.

Generally, the ceramics recovered from Op 10 are qualitatively similar to those recovered at other excavations conducted at Alabama; that is to say, they are poorly preserved, highly eroded, and mostly fragmentary (Howie and Jordan 2018). A small subset of non-diagnostic sherds (~15-25) appear to have been modified to produce tools possibly used in the production of pottery, similar to the worked sherds identified by Jordan at Uxbenká (Jordan and Prufer 2017). Further analysis of these artifacts is required to confirm this preliminary observation.

A subset of the recovered ceramics were diagnostic (n=140; 5.46% of the ceramic assemblage), based on the presence of features related to the shape and form of the original vessel (e.g., rims, bases, jar necks, appendages) as well as surface treatment (e.g., slip, incisions, stamps). These were recovered from 77 discrete shovel test pits (29.8% of the total), from both on and off-plaza contexts. The majority of these diagnostic sherds were recovered from the occupation horizon. This diagnostic sub-assemblage is represented by a diversity of both local and non-local vessels of various forms, including bowls, dishes, jars, and censors/figurines.

Although the type-variety classification system is of limited utility as an analytical approach to the ceramic assemblages at Alabama (see Howie and Jordan 2018; Jordan et al. 2021), a few recognizable Late and Terminal Classic wares were noted in the Op 10 assemblage. These included examples of imported, red-slipped British Honduras Volcanic Ashwares (n=18; Gifford 1976), Hondo Red (n=4; Hammond 1975; see also Chapter 6 of this report), Dolphin Head Red (n=1), Moulded-carved (n=1; Ting et al. 2014), and Mount Maloney Black ([LCII] n=1; LeCount et al. 2002). A small sherd fragment featuring an S-shaped stamp, similar to those identified at Nim Li Punit, was also recovered (Fauvelle 2012).

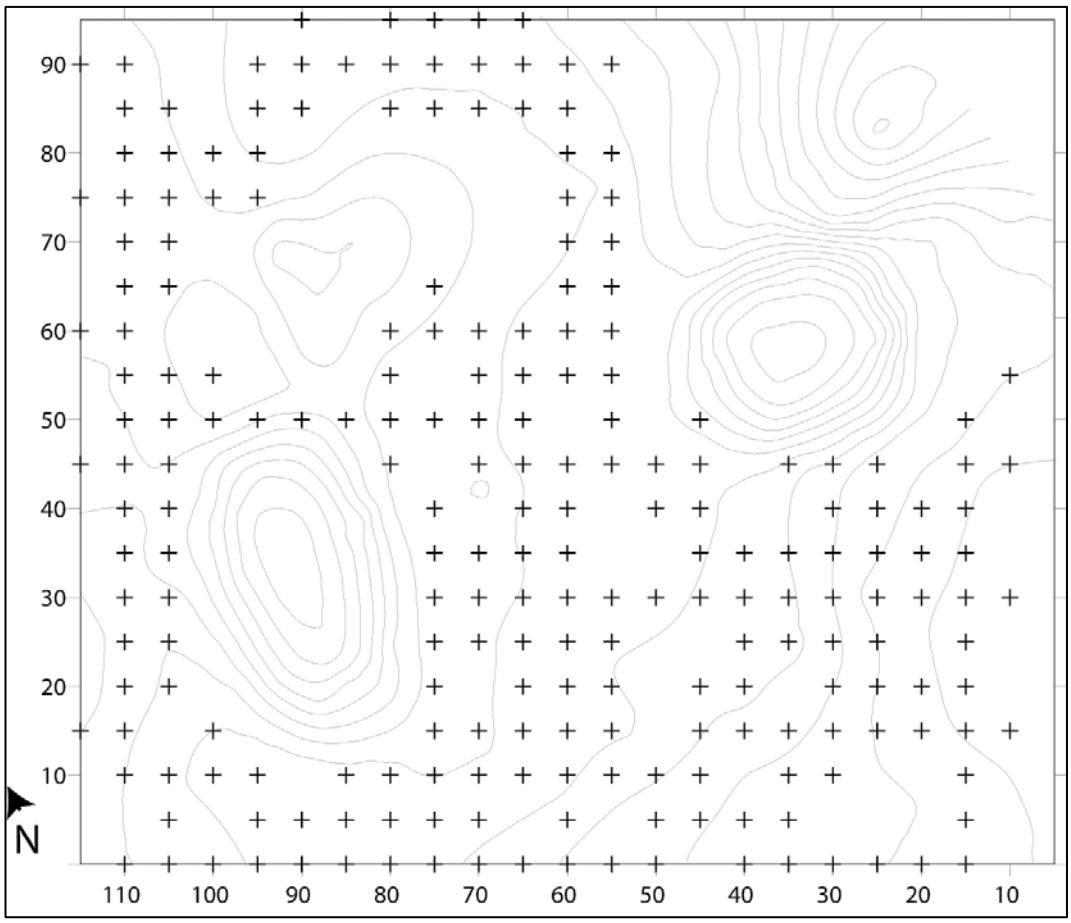

Figure 4.6: Plot of shovel test pits that contained ceramic material (219 of 254).

While it is difficult to assign a ceramic date based on the presence of so few clear temporally diagnostic examples, a few observations and hypotheses about the temporal use of non-mound space and the construction of the plaza can be surmised from this data as well as radiocarbon dates. The presence of diagnostic wares, in particular British Honduras Volcanic Ashwares, recovered in association with the occupation horizon beneath the plaza construction, indicates this space was in use during the late facet of the Late Classic (supported by excavations at nearby mounds, see Chapter 3 of this volume). A Mount Maloney Black sherd was recovered from an off-plaza context but was recovered *in situ* at 40 cm below the ground surface. A carbon sample (10465-CB042) recovered from the occupation horizon in STP 166/Subop 5N,70W was subject to AMS dating and returned date ranges of cal. AD 664 to 774, cal. AD 785 to 836, and cal. AD 846 to 877 (2σ; UOC-16317), but probably dates to the earlier end of this range (cal. AD 675-773). Although there were few diagnostic ceramics recovered from the boulder and cobble plaza construction fill, a Terminal Classic Moulded-carved sherd was recovered from this mixed context. A carbon sample (10465-CB035) recovered from within the cobble ballast in STP 40/ Subop 35N,45W was subject to AMS dating and returned date ranges of cal. AD 680 to 745, cal. AD 759 to 778, and cal. AD 784 to 878 (2σ; UOC-16254), but probably dates to the later end of this range (cal. AD 784 to 878). While a few British Honduras Volcanic Ashware sherds were recovered from the surface of the plaza, these lack sufficient temporally diagnostic features to assign them to either the Late or Terminal Classic. Thus, while it remains difficult to assign a precise construction date based solely on the presence of so few diagnostic sherds, the plaza's stratigraphic position vis-à-vis the underlying occupation horizon, suggests that the plaza was constructed either during the late facet of the Late Classic or the early Terminal Classic period,

and was in use throughout the Terminal Classic. This interpretation is supported by other AMS carbon dates for the group (reported in Chapter 3).

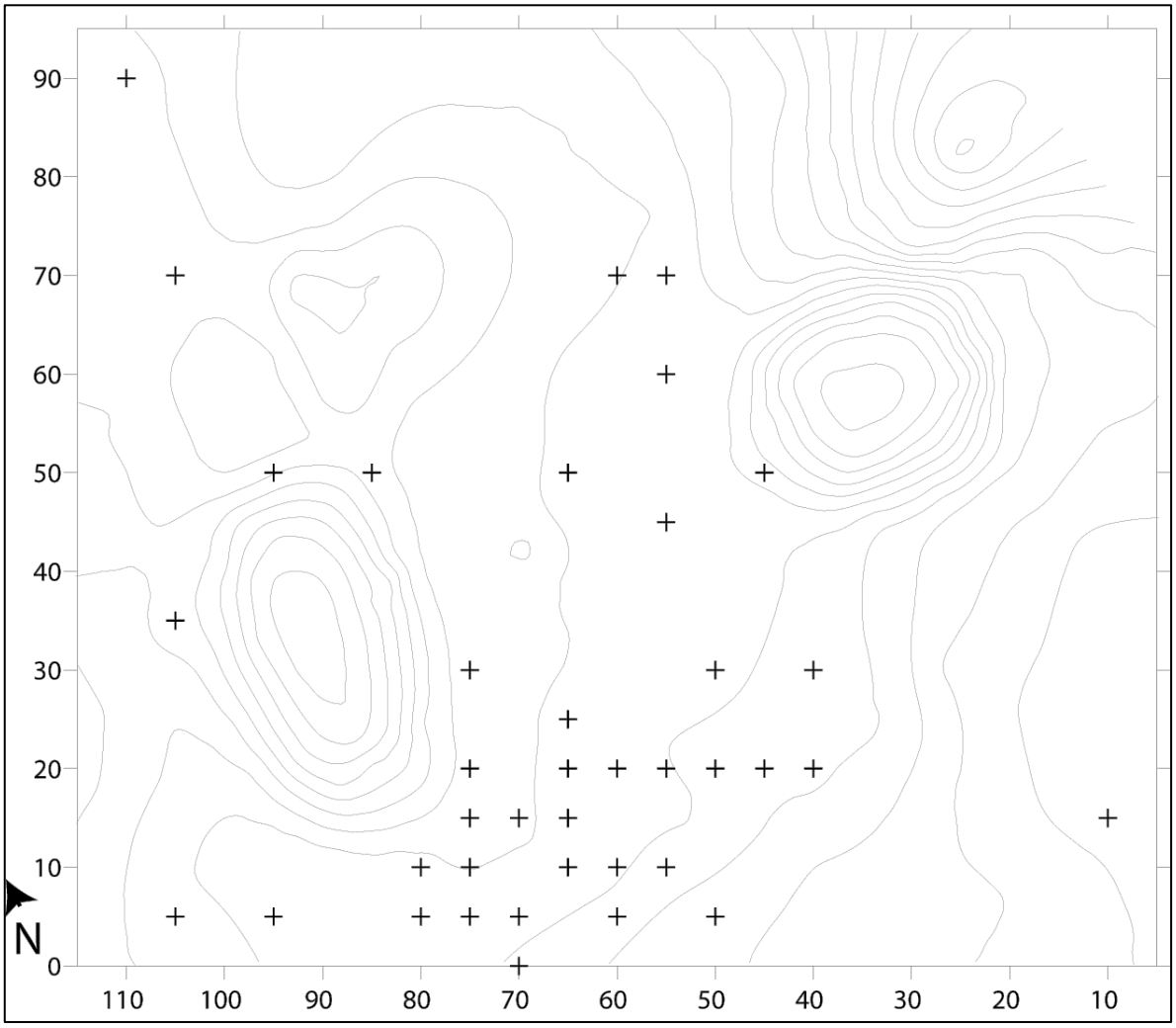

Figure 4.7: Plot of shovel test pits that contained daub (38 of 254).

Daub

Two-hundred and twenty-one pieces of daub (n=221; 7.35% of the total artifact assemblage) were recovered from 38 shovel test pits. The recovered daub can be further subdivided into smooth daub, possibly from resurfacing activities (n=23; 10.4% of recovered daub) and coarse, 'popcorn'-like daub consistent with that used to 'plaster' perishable structures (n=198; 89.6% of recovered daub)(see Kruger 2015 for a good summary on daub and archaeological interpretation). The density of daub debris was variable across test pits, ranging from a single artifact (n=7) to 26 artifacts (n=1). Eight shovel test pits contained more than 10 pieces of daub. The distribution of shovel test pits containing at least one piece of daub is shown in Figure 4.7. Interestingly, there is a cluster of shovel test pits to the southeast of ALA-002B that featured daub artifacts.

One piece of daub was recorded as a small find (Cat. #10465-DB001). This piece of daub was recovered as part of STP 69/Subop 10N,55W from a yellowish-brown (10YR 5/6) compact clay matrix, situated approximately 45cm below ground surface, beneath the plaza construction core and 20cm into the alluvial sandy clay loam horizon. This daub artifact was accompanied by

several non-diagnostic ceramic sherds (n=18; Figures 4.8, 4.9). The object is relatively large (98mm in length, 88mm in width, and 56mm across, weighing 228.3g), spheroid in shape, features wood impressions throughout, and was burned/scorched on one side (Figure x.10). A carbon sample (10465-CB022) recovered in association with the daub artifact was subject to AMS dating and returned date ranges of cal. AD 727 to 738 and cal. AD 768 to 890 (2σ; UOC-12576), with a 95.1% probability of cal. AD 768 to 890.

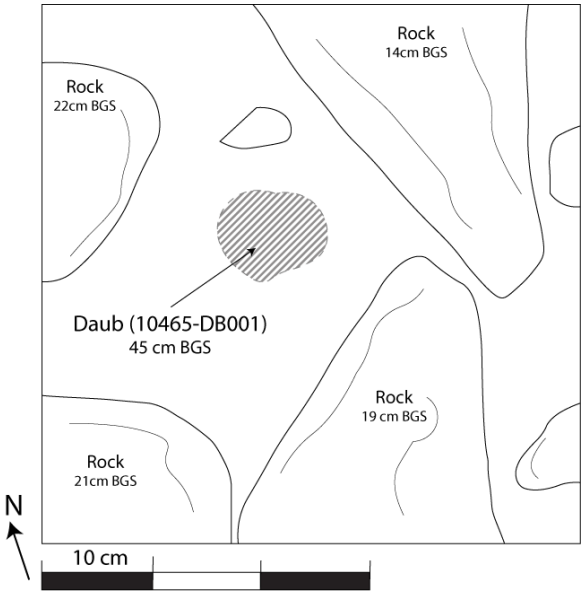

Figure 4.8: Stone enclosure feature containing daub (STP 69/Subop 10N,55W) at ALA-002.

Figure 4.9: Stone enclosure feature containing daub at STP 69/Subop 10N,55W, facing north.

Figure 4.10: Daub artifact recovered from STP 69/Subop 10N,55W.

Lithics

One-hundred and sixty lithic artifacts (n=160; 5.32% of the total artifact assemblage) were recovered from 74 shovel test pits. These lithic artifacts are summarized in Table 4.1 according to debris and material types. The density of lithic debris varied from a single artifact (n=40) to maximum of 12 artifacts (n=1). Most of lithic-bearing shovel test pits (n=70; 94.6%) contained 5 or fewer artifacts. The distribution of shovel test pits containing at least one lithic artifact is shown in Figure 4.11. In addition to debitage and other materials, an unknown chert flake tool (Cat. #10465-LT004) was recovered from STP 196 /Subop 40N,105W.

A preliminary analysis of the lithic material from Op 10 was conducted by the author. The goals of this analysis were to identify the types of materials present in the assemblage, to describe the artifacts individually, and to identify any artifacts that were clearly formal or expedient tools. Materials assessment was based on comparison to the SCRAP rock/mineral type collection. In total, 150 of the recovered 160 artifacts, were analyzed (10 of the recovered lithic items were noted to be natural in origin, likely from the alluvial matrix).

Table 4.1: Lithic debitage types and materials recovered from the Operation 10 sample area.

	Lithic Debitage Type (Count)									
	*Block	**Chunk	Chunk	Core	Flake	Flake (Cortex)	Flake	† Piece	‡ Slab	Total
Chert	0	8	1	1	17	1	1	0	0	29
Feldspar	0	5	0	0	0	0	0	3	0	8
Feldspar (Possible)	0	1	0	0	0	0	0	0	0	1
Feldspar/Plagioclase	0	1	0	0	0	0	0	0	0	1
Phyllite	1	0	0	0	1	0	0	1	0	3
Quartz (Type 1)	0	2	0	0	3	0	0	4	0	9
Quartz (Type 2)	0	10	0	0	1	0	0	11	0	22
Quartz (Type 3)	0	4	0	0	0	0	0	2	0	6
Quartz (Type 4)	0	1	0	0	3	0	0	0	0	4
Quartz (Type 5)	0	5	0	0	0	0	0	3	0	8
Quartz (Type 6)	0	6	0	0	0	0	0	5	0	11
Quartz (Unknown)	0	0	0	0	1	0	0	4	0	5
Quartzite (Type 1)	0	2	0	0	0	0	0	2	0	4
Quartzite (Type 2)	0	1	0	0	0	0	0	0	0	1
Quartzite (Type 7)	0	1	0	0	0	0	0	0	0	1
Quartzite (Unknown)	1	0	0	0	0	0	0	0	0	1
Sandstone	0	2	0	0	0	0	0	0	0	2
Slate	0	0	0	0	4	0	0	16	4	24
Unknown Material	0	7	0	0	1	0	0	1	1	9
Total	2	56	1	1	31	1	1	52	5	150

*block refers to cuboid shapes; **chunk refers to large angular shapes; †piece refers to small, non-angular debris; ‡ slab refers to thin, rectangular debris

While providing some interesting data, this preliminary analysis has created more questions than it answers. A formal and full analysis of lithic materials may help clarify some of these issues. For example, only 29 chert artifacts were recovered, distributed evenly across the sample area (28 shovel test pits), primarily represented by small flakes (n=17; 58.6% of the total chert assemblage). Given the relative paucity of chert within the lithic assemblage, and the lack of chert deposits in the region, it is likely that the inhabitants of ALA-002 were utilizing other locally available materials in its place to create both formal and expedient tools. A more thorough examination of these locally available materials, such as recovered quartz and quartzite artifacts, will be undertaken to understand if these materials have been culturally modified. Likewise, these materials will be compared to those from previous SCRAP analyses (Peuramaki-Brown et al. 2016).

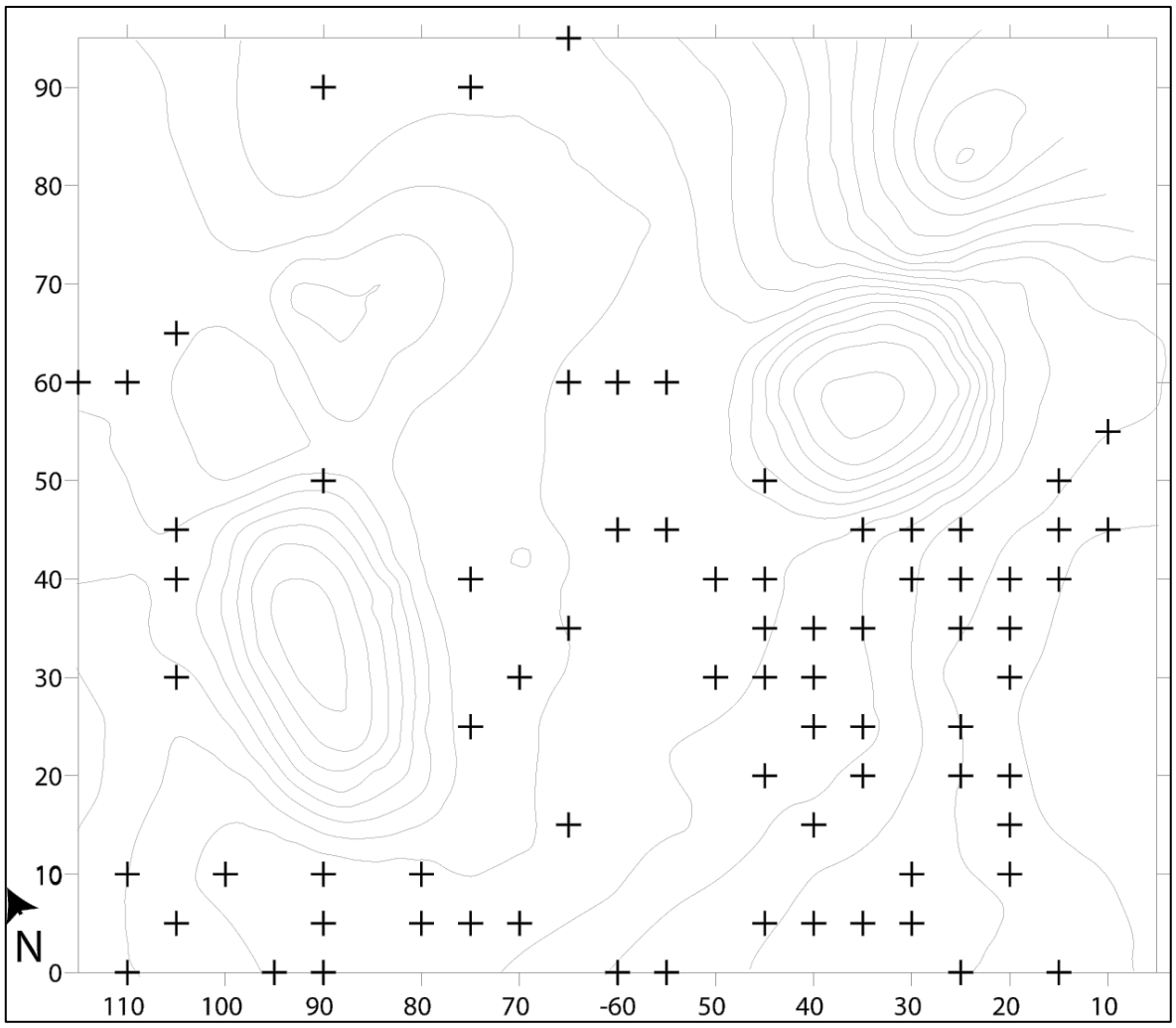

Figure 4.11: Plot of shovel test pits that contained lithic material (74 of 254).

Obsidian

Thirty-eight obsidian artifacts (n=38; 1.26% of the total artifact assemblage) were recovered from 34 shovel test pits. The obsidian assemblage can be divided into blades (n=27; 71.1%) and flakes (n=11; 28.9%). Table 4.2 shows the recovered obsidian and their provenience. The obsidian was distributed across the sample area, with most test pits bearing a single artifact (n=31), two test pits (n=2) bearing two artifacts, and one test pit (n=1) bearing three artifacts. The distribution of shovel test pits containing at least one piece of obsidian is shown in Figure 4.12. All obsidian artifacts were exported for future sourcing analysis.

Table 4.2: Operation 10 obsidian small finds assemblage

Op	STP#	Suboperation #	Description	Cat. #
10	18	20N,30W	blade fragment	10465-OB009
10	15	20N,35W	blade fragment	10465-OB010
10	34	15N,45W	blade fragment	10465-OB014
10	111	60N,60W	blade fragment	10465-OB032
10	8	35N,25W	blade fragment	10465-OB035
10	80	40N,45W	blade fragment	10465-OB051

Op	STP#	Suboperation #	Description	Cat. #
10	109	45N,35W	flake	10465-OB052
10	62	45N,60W	blade fragment	10465-OB053
10	70	30N,50W	possible biface fragment	10465-OB054
10	79	20N,50W	flake	10465-OB055
10	87	20N,20W	blade fragment	10465-OB056
10	131	50N,55W	blade fragment	10465-OB059
10	131	50N,55W	blade fragment	10465-OB060
10	149	75N,95W	blade fragment	10465-OB061
10	165	0N,70W	blade fragment	10465-OB062
10	155	15N,75W	blade fragment	10465-OB063
10	171	50N,85W	possible shatter	10465-OB064
10	41	25N,55W	blade fragment	10465-OB065
10	196	40N,105W	blade fragment	10465-OB067
10	195	35N,105W	blade fragment	10465-OB068
10	178	65N,105W	flake	10465-OB069
10	202	5N,80W	blade fragment	10465-OB070
10	199	50N,95W	blade fragment	10465-OB071
10	209	30N,70W	flake	10465-OB073
10	209	30N,70W	flake	10465-OB074
10	210	35N,70W	blade fragment	10465-OB075
10	210	35N,70W	blade fragment	10465-OB076
10	213	50N,70W	blade fragment	10465-OB077
10	215	45N,80W	blade fragment	10465-OB078
10	238	55N,110W	blade fragment	10465-OB085
10	231	5N,105W	flake	10465-OB086
10	236	70N,110W	blade fragment	10465-OB087
10	228	55N,105W	blade fragment	10465-OB088
10	212	45N,70W	blade fragment	10465-OB089
10	239	10N,105W	blade fragment	10465-OB090
10	250	50N,105W	blade fragment	10465-OB091
10	209	30N,70W	flake	10465-OB093
10	168	10N,65W	flake	10465-OB094

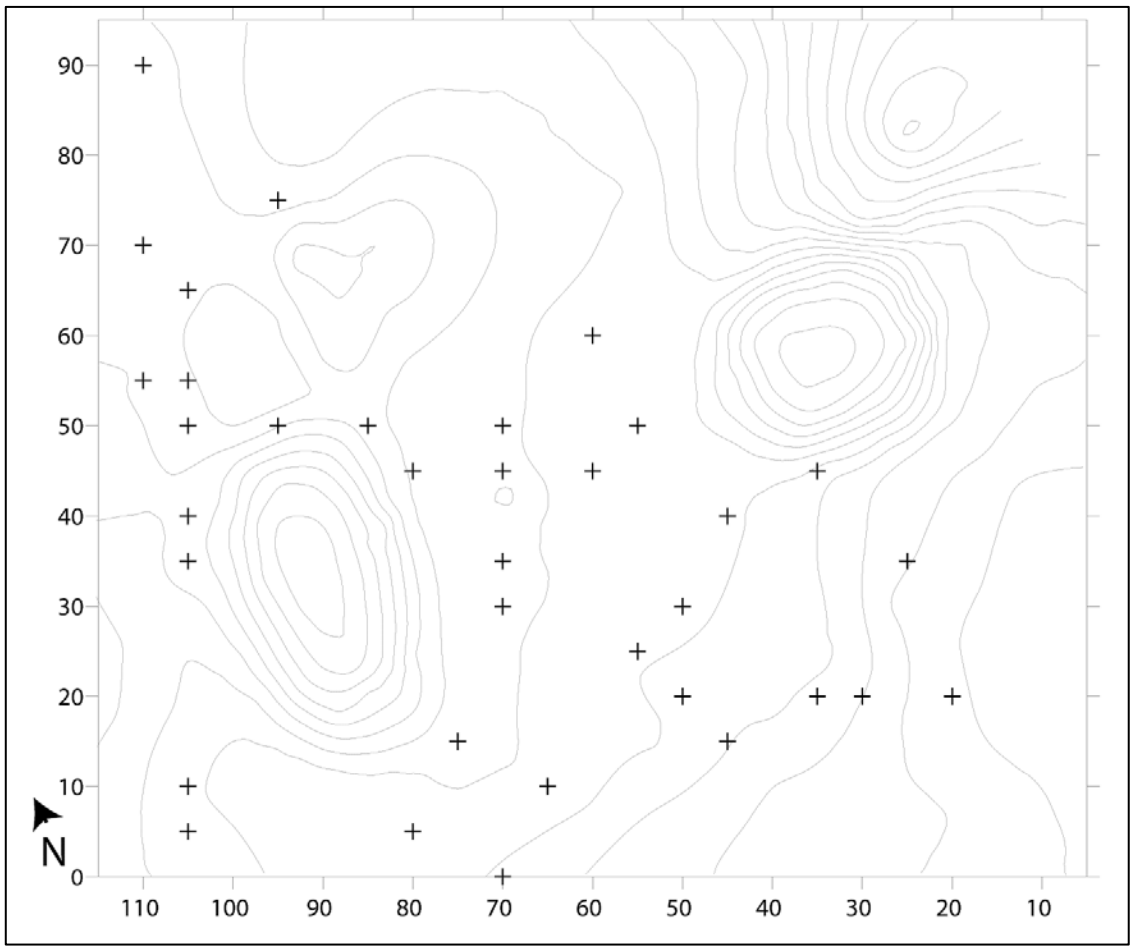

Figure 4.12: Plot of shovel test pits that contained obsidian (34 of 254)

Groundstone

Twenty-two objects of groundstone (n=22; 0.73% of the total artifact assemblage) were recovered from 15 shovel test pits. The groundstone assemblage includes 13 raw material artifacts, including granites and red slate (Table 4.3). Nine small finds were recovered, including *mano* fragments (Cat. #10465-GS002 [granite], 10465-GS005 [granite], 10465-GS008 [unknown material]), *metate* fragments (Cat. #10465-GS002 [granite], 10465-GS014 [granite], 10465-GS015 [granite]), a slate disk (Cat. #10465-GS009), a possible rubbing stone (Cat. #10465-GS010), and a cylindrical object with an angled tip (about the size of and resembling a tube of lipstick) made of red slate (Cat. #10465-GS006; Figure 4.13). This latter artifact may possibly be a type of specialized polisher but is also similar in shape to stone bits identified as having a function related the indirect percussion method of macrocore and biface manufacture (Clark 1985:6). The density of groundstone objects was relatively consistent, with a maximum of three items (raw granite) recovered from a single shovel test pit (STP 35/ Subop 20N,45W) associated with a mottled clay and daub feature (discussed below). The distribution of shovel test pits containing at least one piece of groundstone is shown in Figure 4.14.

Figure 4.13: Red slate artifact (Cat. #10465-GS006) recovered from STP 171/ Subop 50N,85W.

Table 4.3: Operation 10 groundstone small finds assemblage.

Op	STP#	Suboperation #	Description	Cat #
10	69	10N,55W	mano fragment (granite)	10465-GS002
10	38	25N,40W	metate fragment	10465-GS004
10	7	30N,25W	mano fragment	10465-GS005
10	171	50N,85W	red slate - polisher/smoothing stone?	10465-GS006
10	211	40N,70W	mano fragment - on plaza - unknown material	10465-GS008
10	210	35N,70W	slate disk	10465-GS009
10	210	35N,70W	rubbing stone?	10465-GS010
10	200	55N,80W	metate fragment	10465-GS014
10	210	35N,70W	metate fragment	10465-GS015

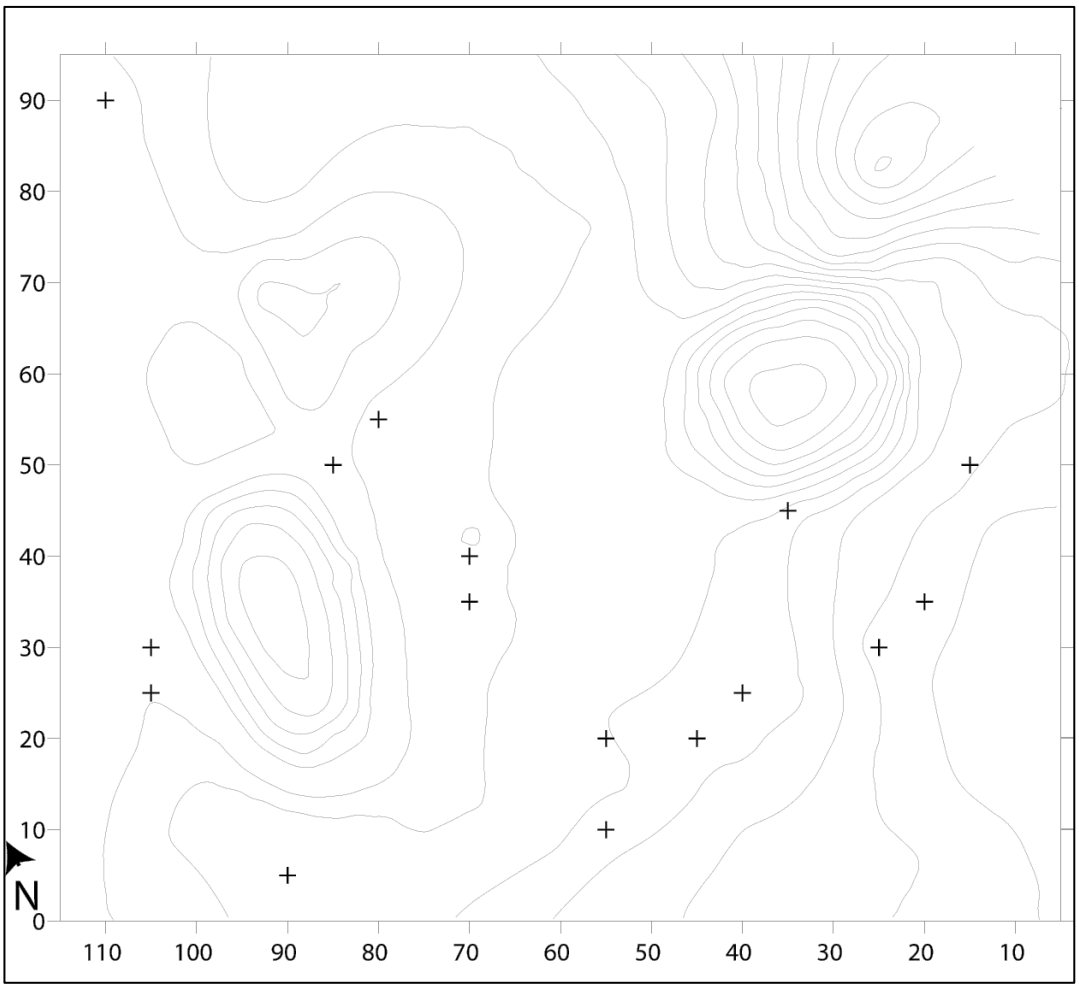

Figure 4.14: Plot of shovel test pits that contained groundstone material (15 of 254).

Other Features and Deposits

Some shovel test pits uncovered special features or deposits (Figure 4.15). These include areas of burning, unique matrices accompanied by cultural materials, and relatively dense concentrations of artifacts, possibly household middens. These features and deposits are described below.

STP 35/ Subop 20N,45W: Mottled Clay and Daub Feature. Shovel test pit 35 (Subop 20N,45W) was initially terminated early in the field season when granite was noted to be present at the base of the plaza cobble core. At this point in the field season these large granite boulders were assumed to be buried architecture; however, once more shovel test pits showed that granite was not indicative of architecture, but rather acted as the base of the plaza construction core, the test pit was reopened to access the artifact-bearing occupation horizon beneath the fill.

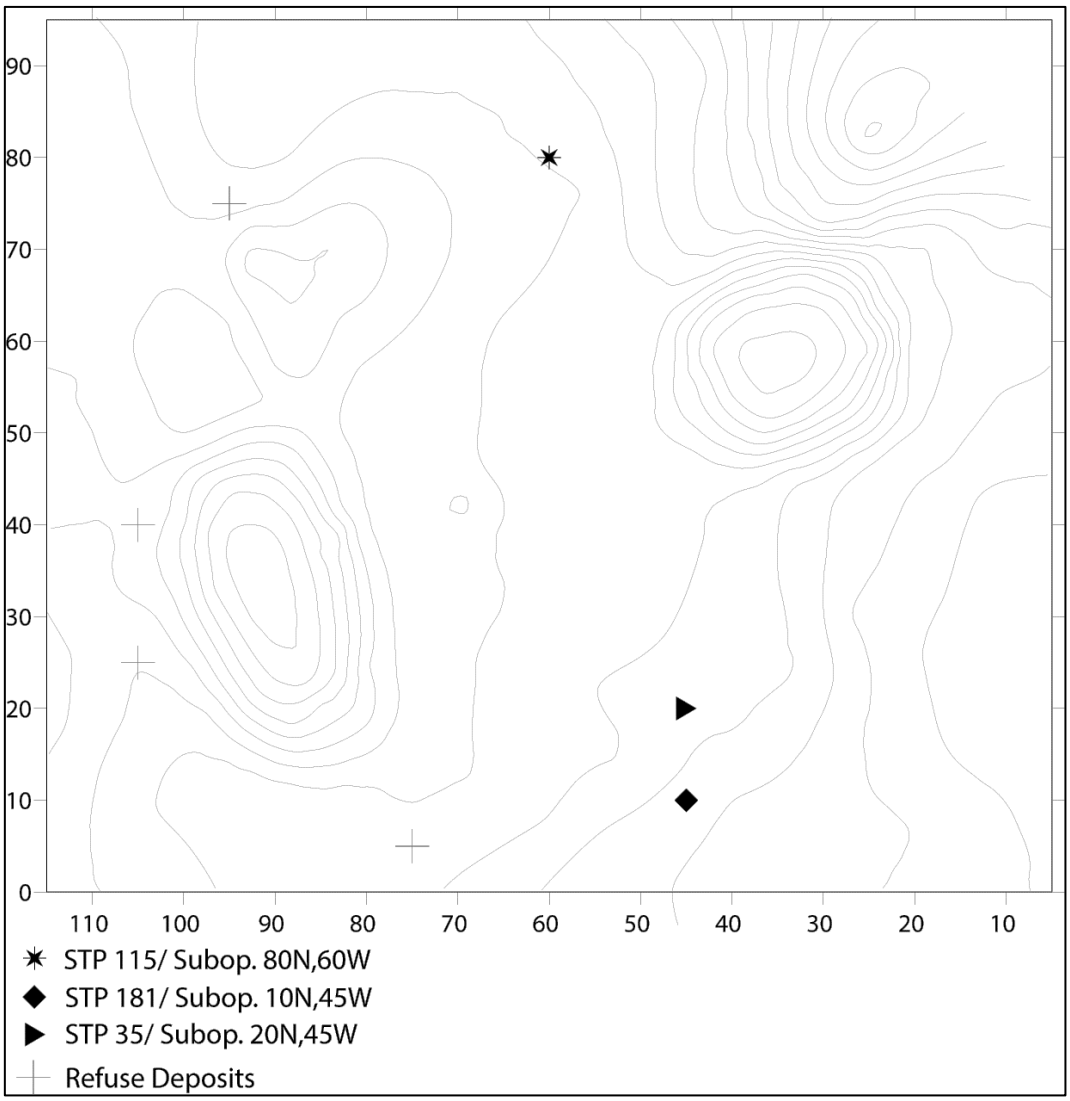

Figure 4.15: Plot of shovel test pits that uncovered features or refuse deposits (7 of 254).

Beneath the construction core, 15cm of the alluvial sandy clay loam occupation horizon was noted; however, beneath this was an 8-10 cm-thick layer of mottled reddish-brown clay from 40-50cm below the ground surface level (Figure 4.16). Non-diagnostic ceramics (n=3), several pieces of daub (n=25), and three small pieces of granite (n=3) were recovered from this matrix. The daub was clustered in the SW corner of the shovel test pit, in an area approximately 20cm (E-W) by 15cm (N-S). In the SE corner of the shovel test pit was a lens of red clay, approximately 10cm thick, located in the profile wall. A carbon sample (10465-CB034) recovered *in situ* from 50cm below ground surface was subjected AMS analysis and dates to cal. AD 670 to 777 (2σ, UOC-12579; see discussion in Chapter 3). Two soil samples were recovered from the shovel test pit, one at 25cm below ground surface (Cat. #10465-S034) associated with the sandy clay loam, and the other at 50cm below ground surface (Cat. #10465-S195) associated with the daub located in the SW corner of the shovel test pit. Associated photos include RedCamera-8177, 8179, 8180, 8181, 8182, 8183, 8184, 8185, and 8186.

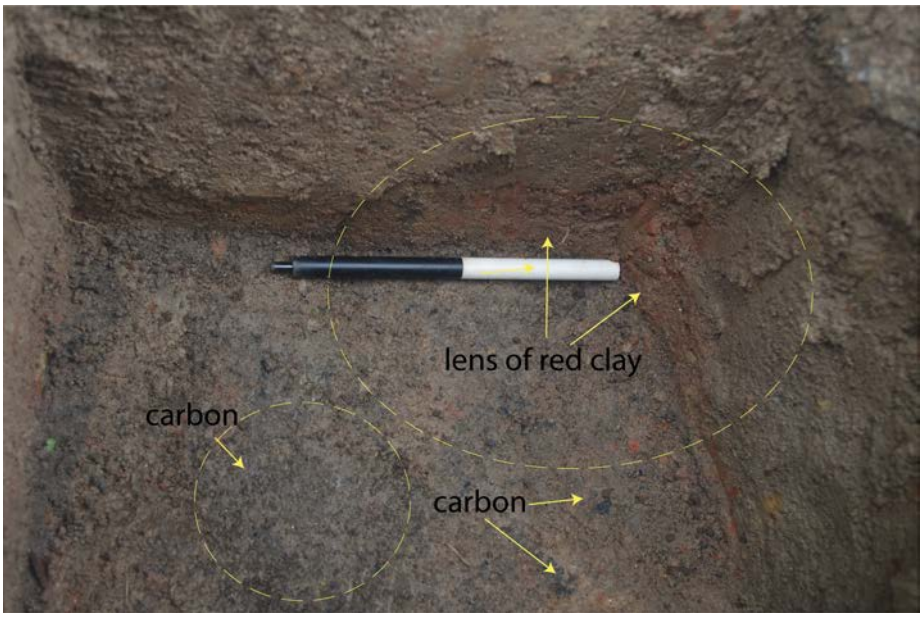

Figure 4.16: Base of STP 35/ Subop 20N,45W, showing lens of red clay, facing east.

STP 181/ Subop 10N,70W: Burn Feature #1. Shovel test pit 181 (Subop 10N,70W) was terminated at a depth of 40cm below ground surface as an area of burning was noted between three boulders associated with the plaza construction core (Figure 4.17). Two non-diagnostic ceramics were recovered from the test pit. Two soil samples (Cat. #10465-S211, 10465-S316) were collected at 40cm below ground surface. Associated photos include Red Camera 8419.

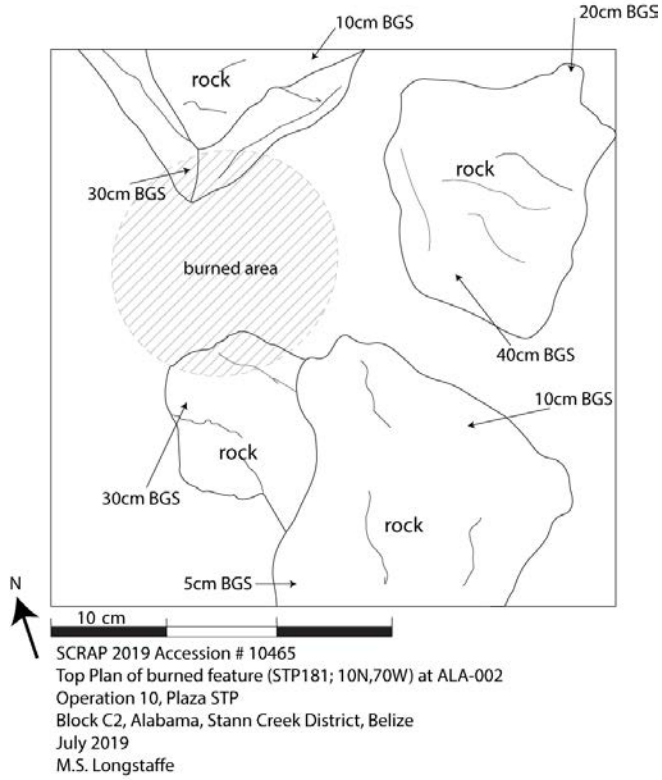

Figure 4.17: Top plan of STP181/ Subop 10N,70W Burn Feature.

STP 115/ Subop 80N,60W: Burn Feature #2. Shovel test pit 155 (Subop 80N,60W) was located adjacent to the northeastern corner of ALA-002C. Two large, hewn granite blocks were documented jutting out of the shovel test pit sidewall at a depth ranging from 16 to 33cm below ground surface (Figure 4.18 and 4.19). These are not a component of plaza construction fill as no other aggregate/masonry core material was documented. Ceramics were recovered both above and below the granite blocks. At 40cm below ground surface, a layer of alluvial matrix containing charcoal was noted, between 10-15cm in depth, and removed for floatation. Floatation returned significant quantities of carbon but no other materials. A carbon sample (10465-CB038) recovered in situ from this burned layer was subjected to AMS analyses and returned a modern date (UOC-16255) suggesting this feature was, in fact, related to recent disturbance. No additional artifacts were recovered. At 55cm below ground surface, the matrix changed to a sandy clay loam, reddish in colour, with some residual charcoal inclusions from the burning above. Associated photos include Red Camera 8296, 8300, and 8301. Four soil samples were recovered from this shovel test pit at 30cm below ground surface (Cat. #10465-S263), 40cm below ground surface (Cat. #10465-S269), and two at 55cm below ground surface (Cat. #10465-S152, 10465-S200).

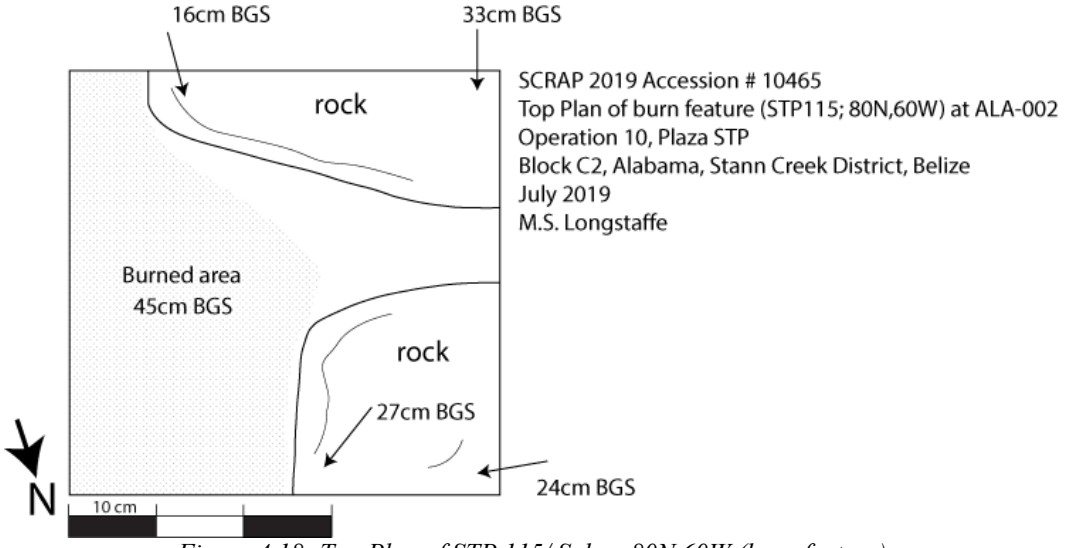

Figure 4.18: Top Plan of STP 115/ Subop 80N,60W (burn feature)

Figure 4.19: Burn feature at STP 115/ Subop 80N,60W, facing south.

Possible Refuse Deposits. Four shovel test pits of relatively dense cultural material—possibly representing refuse deposits (middens)—were documented. The densest of these deposits, STP 229 (Subop 25N,105W) was situated off the western edge (i.e., the back) of ALA-002B. This shovel test pit contained 138 ceramic sherds concentrated in an approximately 5cm thick lens between 50 and 55cm below ground surface. When weighted, this ceramic density is roughly equivalent to 770 sherds/m^3, similar to densities of middens documented at Quiriguá by Ashmore (2007:50-51). A piece of granite, with inclusions of potassium feldspar, was also recovered from this context. The matrix of this shovel test pit was sandy clay loam, brown in colour (10YR 5/3), with few to no inclusions. The test pit was terminated at 60cm below the ground surface. Soil samples were taken at a depth of 30cm below ground surface (Cat. #10465-S256) and 50cm below ground surface (Cat. #10465-S310).

Another deposit situated near the NW corner of ALA-002B, STP 196 (Subop 40N,105W), returned ceramic sherds (n=30) as well as an unknown chert flake tool (Cat. #10465-LT004) and an obsidian blade fragment (Cat. #10465-OB067). While not an overly dense deposit, the variety of materials recovered, coupled with its location off the back of ALA-002B, suggests this deposit may have been household refuse, either deliberately deposited or washed down from the adjacent platform. The matrix of this shovel test pit was sandy clay loam, brown in colour (7.5YR 5/3), with few to no inclusions. The test pit was terminated at 60cm below the ground surface. A soil sample was taken at a depth of 30cm below ground surface (Cat. #10465-S210).

A deposit associated with STP 149 (Subop 75N,95W), situated near the NW corner of ALA-002C, returned 58 ceramic sherds, including diagnostic British Honduras Volcanic Ashware rim sherds, a possible worked sherd, and a single obsidian blade fragment (Cat. #10465-OB061). When weighted, this ceramic density is roughly equivalent to 325 sherds/m^3, which while not an overly dense deposit in general terms, is dense for the site of Alabama. The matrix of this deposit was compact sandy clay loam, brown in colour (10YR 5/3), and lacked inclusions. The test pit was terminated at 60cm below ground surface. Soil samples were taken at a depth of 30cm below ground surface (Cat. #10465-S274) and 50cm below ground surface (Cat. #10465-S198).

Finally, a deposit associated with STP 163 (Subop 5N,75W), situated approximately 10m away from the southeastern corner of ALA-002B, was found near the edge of the southwestern-most corner of the formal plaza surface. It consisted of ceramics (n=50), daub (n=26), and lithic materials comprised of slate and granite (n=5). Materials were recovered from sandy clay loam approximately 30cm below ground surface, immediately below a 10cm thick layer of cobbles. These cobbles were similar to those used in the plaza construction core, but the layer was shallow and lacked the underlying larger cobbles or boulders typically seen in association with plaza construction. The matrix of this deposit was sandy clay loam, brown in colour (7.5YR 5/3), and lacked inclusions. The test pit was terminated at 60cm below ground surface. A soil sample (Cat. #10465-S149) was taken at a depth of 40cm below ground surface.

Conclusion

Shovel test pit excavations at settlement site ALA-002, coupled with test excavations at the three associated mounds (see Chapter 3), indicate the presence of an active household group during the Late/Terminal Classic period. This household was of greater-than-modest means, made use of a large amount of space, including a formal raised plaza constructed to cover a space of approximately 2250 m^2 between structures. The construction of this plaza was no small undertaking. Builders would have gathered river cobbles and boulders from nearby creeks and

drainages, as well as granites, to construct the core of the plaza platform. The minimal artifact material recovered from the plaza construction core suggests that the architects of this plaza did not incorporate significant quantities of household refuse into its construction. This is not to suggest that ALA-002 was not occupied prior to the construction of this plaza—the presence of an underlying, artifact-rich, occupation horizon suggests this space was in use throughout the Late Classic to Terminal Classic. When constructing the plaza, like they did with platforms, builders did not incorporate large quantities of refuse; whether this represents an intentional choice or not remains to be determined.

Artifacts recovered from various contexts associated with the plaza and off-mound space indicate that the residents of ALA-002 had access to resources from both local sources as well as those that were imported. While many ceramics appear to be locally made, several examples were clearly imported. Ceramic materials suggest some connections to regions outside of the modern Stann Creek District, such as Southern Belize (Toledo), Northern Belize, and the Belize Valley or eastern Peten. Likewise, while the majority of the lithic chippedstone assemblage consists of readily available local rocks and minerals, such as quartz, quartzite, and phyllite, examples of imported materials such as chert and obsidian were also documented.

Table 4.4: Bulk artifact counts by shovel test pit from Operation 10.

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
1	0N 25W	0	0	12	38.8	1	2.4	0	0	0	0	0	0	13
2	5N 25W	0	0	0	0	0	0	0	0	0	0	0	0	0
3	10N 25W	0	0	0	0	0	0	0	0	0	0	0	0	0
4	15N 25W	0	0	9	56.6	0	0	0	0	0	0	0	0	9
5	20N 25W	0	0	1	2.3	1	0.6	0	0	0	0	0	0	2
6	25N 25W	0	0	6	13	1	1.3	0	0	0	0	0	0	7
7	30N 25W	0	0	1	12.7	0	0	0	0	0	0	0	0	1
8	35N 25W	0	0	6	16.7	2	8.1	0	0	0	0	0	0	8
9	40N 25W	0	0	6	13.6	3	?	0	0	0	0	0	0	9
10	45N 25W	1	14.3	9	23	1	?	0	0	0	0	0	0	11
11	40N 30W	0	0	30	59.2	5	13.4	0	0	0	0	0	0	35
12	35N 30W	1	3.8	10	35.4	0	0	0	0	0	0	0	0	11
13	30N 35W	0	0	9	37.6	0	0	0	0	0	0	0	0	9
14	25N 35W	7	120.6	65	129.6	8	124	0	0	0	0	0	0	80
15	20N 35W	0	0	0	0	1	16.7	0	0	0	0	0	0	1
16	30N 30W	0	0	4	11.7	0	0	0	0	0	0	0	0	4
17	25N 30W	3	17.9	42	110.9	0	0	0	0	0	0	0	0	45
18	20N 30W	1	7.4	13	42.4	0	0	0	0	0	0	0	0	14
19	15N 30W	0	0	6	20.1	0	0	0	0	0	0	0	0	6
20	10N 30W	0	0	18	38.1	3	1.5	0	0	0	0	0	0	21
21	5N 30W	0	0	0	0	5	12.9	0	0	0	0	0	0	5
22	0N 30W	0	0	5	17.6	0	0	0	0	0	0	0	0	5
23	15N 35W	1	1.9	7	34.6	0	0	0	0	0	0	0	0	8

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
24	10N 35W	0	0	3	7.1	0	0	0	0	0	0	0	0	3
25	0N 45W	0	0	0	0	0	0	0	0	0	0	0	0	0
26	5N 45W	0	0	8	33.3	1	6.1	0	0	0	0	0	0	9
27	5N 35W	0	0	11	25.6	1	7.2	0	0	0	0	0	0	12
28	0N 35W	0	0	13	29.8	0	0	0	0	0	0	0	0	13
29	0N 40W	1	3.5	7	20.9	0	0	0	0	0	0	0	0	8
30	5N 40W	0	0	5	14.3	1	8	0	0	0	0	0	0	6
31	10N 40W	0	0	0	0	0	0	0	0	0	0	0	0	0
32	15N 40W	0	0	13	35.8	2	17.1	0	0	0	0	0	0	15
33	10N 45W	6	16.6	15	42.8	0	0	0	0	0	0	0	0	21
34	15N 45W	1	19.9	10	72.6	0	0	0	0	0	0	0	0	11
35	20N 45W	0	0	4	26.1	3	69.7	25	133.6	0	0	3	217.2	35
36	25N 45W	0	0	0	0	0	0	0	0	0	0	0	0	0
37	20N 40W	0	0	11	33.9	0	0	4	147.2	0	0	0	0	15
38	25N 40W	1	1.3	25	85.9	3	13.9	0	0	0	0	0	0	29
39	30N 45W	0	0	2	7.9	1	0.7	0	0	0	0	0	0	3
40	35N 45W	0	0	3	12.7	1	10.1	0	0	0	0	0	0	4
41	25N 55W	0	0	10	10.1	0	0	0	0	0	0	0	0	10
42	0N 60W	2	23.3	6	24.4	1	4.9	0	0	0	0	0	0	9
43	0N 55W	0	0	6	31.3	4	11.2	0	0	0	0	0	0	10
44	0N 65W	0	0	2	2.6	0	0	0	0	0	0	0	0	2
45	50N 45W	0	0	8	18	2	4.7	0	0	1	25.8	0	0	11
46	5N 55W	0	0	0	0	0	0	0	0	0	0	0	0	0
47	20N 55W	1	1.4	7	10	0	0	4	76	0	0	1	22.1	13

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
48	15N 55W	0	0	16	69.5	0	0	0	0	0	0	0	0	16
49	5N 60W	1	16.1	16	56.8	0	0	3	35.7	0	0	0	0	20
50	10N 60W	0	0	18	93.1	0	0	5	55.3	0	0	0	0	23
51	15N 60W	0	0	1	3.3	0	0	0	0	0	0	0	0	1
52	0N 50W	0	0	2	3.8	0	0	0	0	0	0	0	0	2
53	5N 50W	0	0	3	16.7	0	0	1	8.2	0	0	0	0	4
54	10N 50W	0	0	14	15.9	0	0	0	0	0	0	0	0	14
55	15N 50W	Unexcavated												
56	45N 30W	0	0	4	10.5	3	41.2	0	0	0	0	0	0	7
57	20N 60W	0	0	2	6.3	0	0	3	40.9	0	0	0	0	5
58	25N 60W	0	0	6	42.5	0	0	0	0	0	0	0	0	6
59		STP # skipped												
60	35N 60W	0	0	1	1.6	0	0	0	0	0	0	0	0	1
61	40N 60W	0	0	3	4.2	0	0	0	0	0	0	0	0	3
62	45N 60W	2	7.1	32	133.3	1	7.3	0	0	0	0	0	0	35
63	50N 60W	0	0	0	0	0	0	0	0	0	0	0	0	0
64	55N 60W	0	0	4	14.5	0	0	0	0	0	0	0	0	4
65		Reassigned (STP 111)												
66	40N 50W	0	0	14	44.8	2	17.1	0	0	0	0	0	0	16
67	45N 45W	1	6.9	11	35.4	0	0	0	0	0	0	0	0	12
68	45N 50W	0	0	1	2.1	0	0	0	0	0	0	0	0	1
69	10N 55W	1	4	41	71.3	0	0	14	239	0	0	0	0	56
70	30N 50W	0	0	3	8.5	3	80.3	0	0	2	23.4	0	0	8
71	25N 50W	0	0	0	0	0	0	0	0	0	0	0	0	0

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
72	30N 55W	0	0	3	4.3	0	0	0	0	0	0	0	0	3
73	35N 55W	0	0	0	0	0	0	0	0	0	0	0	0	0
74	30N 40W	1	3.1	17	62.2	1	11.1	1	11.4	0	0	0	0	20
75	35N 40W	1	12.5	3	12.6	6	8.5	0	0	0	0	0	0	10
76	30N 60W	1	4.8	6	64.1	0	0	0	0	0	0	0	0	7
77	35N 50W	0	0	0	0	0	0	0	0	0	0	0	0	0
78	40N 55W	0	0	0	0	0	0	0	0	0	0	0	0	0
79	20N 50W	0	0	0	0	0	0	0	0	2	15.3	0	0	2
80	40N 45W	1	15.1	20	81.6	1	7.7	0	0	0	0	0	0	22
81	35N 35W	2	5.7	25	73.1	1	0.3	0	0	0	0	0	0	28
82	40N 35W	0	0	0	0	0	0	0	0	0	0	0	0	0
83	0N 20W	0	0	3	23	0	0	0	0	0	0	0	0	3
84	5N 20W	0	0	0	0	0	0	0	0	0	0	0	0	0
85	10N 20W	0	0	0	0	1	0.6	0	0	0	0	0	0	1
86	15N 20W	0	0	1	5.3	1	0.1	0	0	0	0	0	0	2
87	20N 20W	0	0	11	35.5	1	22.8	0	0	0	0	0	0	12
88	25N 20W	0	0	0	0	0	0	0	0	0	0	0	0	0
89	30N 20W	0	0	2	12.5	4	22	0	0	0	0	0	0	6
90	35N 20W	0	0	3	13.4	1	1.4	0	0	0	0	1	47.7	5
91	0N 15W	0	0	2	7.8	2	1.6	0	0	0	0	0	0	4
92	40N 20W	3	15.4	22	57.2	12	131.9	0	0	0	0	0	0	37
93	0N 10W	0	0	0	0	0	0	0	0	0	0	0	0	0
94	15N 10W	0	0	4	10.2	0	0	1	15	0	0	0	0	5
95	10N 15W	0	0	1	1.6	0	0	0	0	0	0	0	0	1

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
96	30N 10W	0	0	3	8.2	0	0	0	0	0	0	0	0	3
97	5N 15W	0	63.5	44	73.7	0	0	0	0	0	0	0	0	44
98	45N 10W	0	0	2	7.1	2	1.1	0	0	0	0	0	0	4
99	45N 20W	0	0	0	0	0	0	0	0	0	0	0	0	0
100	40N 15W	0	0	2	6.1	1	0.1	0	0	0	0	0	0	3
101	35N 15W	0	0	1	6.1	0	0	0	0	0	0	0	0	1
102	20N 15W	1	12.8	0	0	0	0	0	0	0	0	0	0	1
103	45N 15W	0	0	3	11.1	2	54.9	0	0	0	0	0	0	5
104	15N 15W	0	0	5	5.7	0	0	0	0	0	0	0	0	5
105	30N 15W	0	0	2	7.9	0	0	0	0	0	0	0	0	2
106	50N 15W	0	0	7	18	1	7.9	0	0	0	0	2	179	10
107	25N 15W	0	0	2	5.3	0	0	0	0	0	0	0	0	2
108	55N 10W	0	0	14	74.4	1	2.6	0	0	0	0	0	0	15
109	45N 35W	2	21.1	48	151.1	3	22.3	0	0	0	0	2	153.8	55
110	45N 55W	0	0	31	87.2	2	1.2	0	0	2	22.2	0	0	35
111	60N 60W	1	15.6	16	56.4	1	1.1	0	0	0	0	0	0	18
112	65N 60W	0	0	7	21.7	0	0	0	0	0	0	0	0	7
113	70N 60W	0	0	6	18.3	0	0	6	138.6	0	0	0	0	12
114	75N 60W	1	19.7	13	54.2	0	0	0	0	0	0	0	0	14
115	80N 60W	0	0	2	16.4	0	0	0	0	0	0	0	0	2
116	75N 55W	1	1.6	0	0	0	0	0	0	0	0	0	0	1
117	80N 55W	0	0	12	65.6	0	0	0	0	0	0	0	0	12
118	85N 55W	0	0	0	0	0	0	0	0	0	0	0	0	0
119	90N 55W	1	5.9	1	3.7	0	0	0	0	0	0	0	0	2

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
120	85N 60W	0	0	6	23.1	0	0	0	0	0	0	0	0	6
121	90N 60W	0	0	2	3.2	0	0	0	0	0	0	0	0	2
122	95N 65W	1	7.8	2	3.5	2	4.7	0	0	0	0	0	0	5
123	90N 65W	0	0	7	12.4	0	0	0	0	0	0	0	0	7
124	85N 65W	1	8.3	6	31.4	0	0	0	0	0	0	0	0	7
125	95N 70W	1	18.3	3	7.2	0	0	0	0	0	0	0	0	4
126	90N 70W	0	0	5	19.1	0	0	0	0	0	0	0	0	5
127	85N 70W	1	14.6	3	18.7	0	0	0	0	0	0	0	0	4
128	70N 55W	0	0	5	17.6	0	0	0	0	3	39.8	0	0	8
129	65N 55W	0	0	11	22.2	0	0	0	0	0	0	0	0	11
130	60N 55W	0	0	5	9.8	2	3.6	0	0	1	3.6	0	0	8
131	50N 55W	0	0	9	29.5	0	0	0	0	0	0	0	0	9
132	55N 55W	0	0	7	26.5	0	0	0	0	0	0	0	0	7
133	95N 75W	0	0	5	13.9	0	0	0	0	0	0	0	0	5
134	90N 75W	0	5.7	1	0	1	1	0	0	0	0	0	0	2
135	85N 75W	0	0	18	41.3	0	0	0	0	0	0	0	0	18
136	95N 80W	0	0	2	4.6	0	0	0	0	0	0	0	0	2
137	90N 80W	0	0	3	10.4	0	0	0	0	0	0	0	0	3
138	85N 80W	1	2.8	1	9.8	0	0	0	0	0	0	0	0	2
139	95N 85W	Unexcavated												
140	90N 85W	2	17.1	5	35.4	0	0	0	0	0	0	0	0	7
141	85N 85W	0	0	0	0	0	0	0	0	0	0	0	0	0
142	95N 95W	0	0	0	0	0	0	0	0	0	0	0	0	0
143	95N 90W	0	0	2	6.2	0	0	0	0	0	0	0	0	2

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
144	90N 90W	0	0	6	41.7	1	2.3	0	0	0	0	0	0	7
145	85N 90W	0	0	6	19.3	0	0	0	0	0	0	0	0	6
146	90N 95W	0	0	7	22.7	0	0	0	0	0	0	0	0	7
147	85N 95W	1	7.5	12	69.4	0	0	0	0	0	0	0	0	13
148	80N 95W	2	8.1	21	106.6	0	0	0	0	0	0	0	0	23
149	75N 95W	6	31.4	52	230	0	0	0	0	0	0	0	0	58
150	85N 100W	0	0	0	0	0	0	0	0	0	0	0	0	0
151	80N 105W	0	0	2	6.7	0	0	0	0	0	0	0	0	2
152	55N 70W	1	8.5	3	12.2	0	0	0	0	0	0	0	0	4
153	60N 70W	0	0	4	28.8	0	0	0	0	0	0	0	0	4
154	10N 75W	0	0	5	18	0	0	0	0	3	35.7	0	0	8
155	15N 75W	2	28.5	38	124.4	0	0	11	72.7	0	0	0	0	51
156	20N 75W	1	2.9	27	126.7	0	0	14	65.2	0	0	0	0	42
157	25N 75W	2	14.3	13	54.2	1	2.4	0	0	0	0	0	0	16
158	30N 75W	1	9.3	9	30.6	0	0	0	0	2	8.8	0	0	12
159	35N 75W	2	37.5	22	95.8	0	0	0	0	0	0	0	0	24
160	40N 75W	3	36.1	13	50.8	3	21	0	0	0	0	0	0	19
161	50N 75W	0	0	2	12.7	0	0	0	0	0	0	0	0	2
162	10N 80W	2	24.4	18	70.1	1	7.6	3	12.6	1	3.9	0	0	25
163	5N 75W	2	22.2	48	90	5	9.4	26	77.3	0	0	0	0	81
164	0N 75W	0	0	1	2.2	0	0	0	0	0	0	0	0	1
165	0N 70W	0	0	9	68.6	0	0	3	36.1	0	0	0	0	12
166	5N 70W	0	0	3	9.5	1	0.9	19	280	0	0	0	0	23
167	5N 65W	0	0	0	0	0	0	0	0	0	0	0	0	0

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
168	10N 65W	0	0	6	45.2	0	0	13	67.8	1	9	0	0	20
169	15N 65W	3	36.4	42	181.2	1	1	2	29.9	0	0	0	0	48
170	50N 90W	5	43	10	28.3	2	27.2	0	0	0	0	0	0	17
171	50N 85W	0	0	26	80.1	0	0	2	5.3	0	0	0	0	28
172	20N 65W	1	11.1	36	163.7	0	0	7	39.3	0	0	0	0	44
173	35N 65W	0	0	4	15.8	2	7	0	0	0	0	0	0	6
174	40N 65W	0	0	12	36.3	0	0	0	0	0	0	0	0	12
175	70N 105W	0	0	25	93.5	0	0	3	41.8	0	0	0	0	28
176	75N 105W	0	0	1	7.1	0	0	0	0	0	0	0	0	1
177	85N 105W	0	0	2	7.7	0	0	0	0	0	0	0	0	2
178	65N 105W	0	0	14	103	2	3.5	0	0	0	0	0	0	16
179	60N 105W	0	0	0	0	0	0	0	0	0	0	0	0	0
180	55N 75W	1	10.5	7	18.2	0	0	0	0	0	0	0	0	8
181	10N 70W	0	0	2	6.7	0	0	0	0	0	0	0	0	2
182	15N 70W	0	0	18	53.4	0	0	15	47.7	0	0	0	0	33
183	0N 90W	0	0	6	19.1	1	0.01	0	0	0	0	0	0	7
184	5N 90W	0	0	21	106	5	2.1	0	0	0	0	1	1.9	27
185	0N 95W	1	30	12	58	1	0.5	0	0	0	0	0	0	14
186	5N 95W	0	0	7	14.3	0	0	1	7.7	0	0	0	0	8
187	60N 75W	0	0	8	24	0	0	0	0	0	0	0	0	8
188	25N 65W	0	0	25	62.8	0	0	?	9.5	2	4.1	0	0	27
189	30N 65W	1	9.5	0	0	0	0	0	0	0	0	0	0	1
190	45N 65W	0	0	1	3	0	0	0	0	0	0	0	0	1
191	60N 80W	2	23.3	5	22.9	0	0	0	0	0	0	0	0	7

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
192	50N 65W	0	0	10	24.8	0	0	0	0	3	10.7	0	0	13
193	60N 65W	1	9.5	9	28.1	2	1.9	0	0	0	0	0	0	12
194		STP # skipped												
195	35N 105W	6	61.9	58	200	0	0	5	29.3	0	0	0	0	69
196	40N 105W	2	11.2	28	154.4	0	0	0	0	0	0	0	0	30
197	85N 110W	0	0	5	12	0	0	0	0	0	0	0	0	5
198	80N 110W	0	0	2	5.8	0	0	0	0	0	0	0	0	2
199	50N 95W	1	6.8	22	86.3	0	0	2	16.8	0	0	0	0	25
200	55N 80W	0	0	5	13.8	0	0	0	0	0	0	0	0	5
201	0N 80W	0	0	11	49.1	0	0	0	0	0	0	0	0	11
202	5N 80W	2	5.1	16	55.8	1	0.4	3	14.6	0	0	0	0	22
203	0N 85W	1	10.3	15	32.2	0	0	0	0	0	0	0	0	16
204	50N 80W	0	0	1	1.4	0	0	0	0	0	0	0	0	1
205	55N 65W	1	4.3	4	14.5	0	0	0	0	0	0	0	0	5
206	75N 110W	0	0	1	6.7	0	0	0	0	0	0	0	0	1
207	20N 70W	0	0	0	0	0	0	0	0	0	0	0	0	0
208	25N 70W	1	6.8	6	31.4	0	0	0	0	0	0	0	0	7
209	30N 70W	0	0	15	57.3	1	0.1	0	0	0	0	0	0	16
210	35N 70W	4	31.1	26	106.4	0	0	0	0	0	0	0	0	30
211	40N 70W	0	0	0	0	0	0	0	0	0	0	0	0	0
212	45N 70W	0	0	9	37.6	0	0	0	0	0	0	0	0	9
213	50N 70W	0	0	6	44.8	0	0	0	0	0	0	0	0	6
214	65N 70W	0	0	0	0	0	0	0	0	0	0	0	0	0
215	45N 80W	0	0	15	45	0	0	0	0	0	0	0	0	15

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
216	5N 85W	0	0	4	14.1	0	0	0	0	0	0	0	0	4
217	10N 85W	0	0	14	36.5	0	0	0	0	0	0	0	0	14
218	10N 90W	0	0	0	0	1	15.7	0	0	0	0	0	0	1
219	10N 95W	0	0	6	19.8	0	0	0	0	0	0	0	0	6
220	0N 100W	0	0	1	10.7	0	0	0	0	0	0	0	0	1
221	5N 100W	0	0	0	0	0	0	0	0	0	0	0	0	0
222	10N 100W	2	27.5	2	2.8	2	12.9	0	0	0	0	0	0	6
223	15N 100W	0	0	20	76	0	0	0	0	0	0	0	0	20
224	30N 105W	3	28.9	33	138.2	7	374.5	0	0	0	0	2	258.7	45
225	80N 100W	0	0	4	19.1	0	0	0	0	0	0	0	0	4
226	75N 100W	0	0	24	146.8	0	0	0	0	0	0	0	0	24
227	55N 100W	0	0	11	24.5	0	0	0	0	0	0	0	0	11
228	55N 105W	1	26.1	11	52	0	0	0	0	0	0	0	0	12
229	25N 105W	2	20.7	136	443.3	0	0	0	0	0	0	1	12.5	139
230	0N 105W	3	43.1	8	28.1	0	0	0	0	0	0	0	0	11
231	5N 105W	0	0	5	28.2	1	1	1	6.6	0	0	0	0	7
232	20N 105W	0	0	14	84.9	0	0	0	0	0	0	0	0	14
233	40N 110W	0	0	11	35	0	0	0	0	0	0	0	0	11
234	45N 110W	2	53.2	11	48.4	0	0	0	0	0	0	0	0	13
235	65N 110W	0	0	10	35.3	0	0	0	0	0	0	0	0	10
236	70N 110W	0	0	7	37.4	0	0	0	0	0	0	0	0	7
237	60N 110W	1	10.2	10	70.2	1	1.5	0	0	0	0	0	0	12
238	55N 110W	0	0	10	43.6	0	0	0	0	0	0	0	0	10
239	10N 105W	0	0	9	44.2	0	0	0	0	0	0	0	0	9

Shovel Test Pit (STP) Number	Subop Coordinate	Ceramic Sherds				Lithic Bulk		Daub Bulk				Groundstone Bulk		TOTAL BULK ARTIFACT COUNT
		Diagnostic Count	Diagnostic Weight (0.0g)	Non-Diagnostic Count	Non-Diagnostic Weight (0.0g)	Lithic Count	Lithic Weight (0.0g)	Regular Count	Regular Weight (0.0g)	Resurface Count	Resurface Weight (0.0g)	Groundstone Count	Groundstone Weight (0.0g)	
240	15N 105W	0	0	0	0	0	0	0	0	0	0	0	0	0
241	0N 110W	0	0	1	6.4	1	1.3	0	0	0	0	0	0	2
242	5N 110W	0	0	0	0	0	0	0	0	0	0	0	0	0
243	10N 110W	2	19.2	5	17.2	1	1.3	0	0	0	0	0	0	8
244	30N 110W	0	0	2	5	0	0	0	0	0	0	0	0	2
245	35N 110W	2	12.3	6	37.6	0	0	0	0	0	0	0	0	8
246	25N 110W	0	0	35	97.3	0	0	0	0	0	0	0	0	35
247	20N 110W	0	0	4	60.3	0	0	0	0	0	0	0	0	4
248	15N 110W	3	74.3	7	29.9	0	0	0	0	0	0	0	0	10
249	50N 110W	1	37.9	1	1.9	0	0	0	0	0	0	0	0	2
250	50N 105W	1	18.9	6	33.6	0	0	0	0	0	0	0	0	7
251	50N 100W	0	0	3	10	0	0	0	0	0	0	0	0	3
252	15N 115W	0	0	7	34.2	0	0	0	0	0	0	0	0	7
253	45N 105W	0	0	18	67.1	5	26.4	0	0	0	0	0	0	23
254	30N 115W	0	0	0	0	0	0	0	0	0	0	0	0	0
255	45N 115W	1	10.1	0	0	0	0	0	0	0	0	0	0	1
256	60N 115W	1	39.1	14	116.5	1	2.4	0	0	0	0	0	0	16
257	75N 115W	0	0	6	31.1	0	0	0	0	0	0	0	0	6
258	90N 115W	0	0	1	2.9	0	0	0	0	0	0	0	0	1
Total		***137**	**1500**	**2424**	**8840.3**	**159**	**1313**	**197**	**1761**	**23**	**202.3**	**13**	**892.9**	**2953**

*one ceramic fragment catalogued as special find - possible figurine fragment - excluded from bulk tabulation

Table 4.5: Lot designations and matrix descriptions from Operation 10.

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
10	Plaza-STP	1	0N,25W	40 cm	10YR 5/3 Brown	Sandy clay loam	8055	Off plaza
11	Plaza-STP	2	5N,25W	60 cm	10YR 5/3 Brown	Sandy clay loam	8056	Off plaza
12	Plaza-STP	3	10N,25W	40 cm	10YR 5/3 Brown	Sandy clay loam	8057	Off plaza
13	Plaza-STP	4	15N,25W	40 cm	10YR 5/3 Brown	Sandy clay loam	8058	Off plaza
14	Plaza-STP	5	20N,25W	40 cm	10YR 5/4 Yellowish Brown	Sandy clay loam	8060	Off plaza
15	Plaza-STP	6	25N,25W	40 cm	10YR 5/4 Yellowish Brown	Sandy clay loam	8059	Off plaza
16	Plaza-STP	7	30N,25W	40 cm	10YR 5/3 Brown	Sandy clay loam	8063	Off plaza
17	Plaza-STP	8	35N,25W	40 cm	10YR 5/3 Brown	Sandy clay loam	8061	Off plaza
18	Plaza-STP	9	40N,25W	40 cm	10YR 5/3 Brown	Sandy clay loam	8138	Off plaza
19	Plaza-STP	10	45N,25W	40 cm	10YR 5/4 Yellowish Brown	Loamy clay	8066	Off plaza
20	Plaza-STP	11	40N,30W	50 cm	10YR 5/4 Yellowish Brown	Sandy clay loam	8064	Off plaza
21	Plaza-STP	12	35N,30W	40 cm	10YR 3/4 Dark Yellowish Brown	Sandy clay loam	8065	On plaza
22	Plaza-STP	13	30N,35W	45 cm	10YR 4/4 Dark Yellowish Brown	Sandy clay loam	4930	On plaza
23	Plaza-STP	14	25N,35W	70 cm	10YR 5/3 Brown	Sandy clay loam	4929	On plaza
24	Plaza-STP	15	20N,35W	40 cm	10YR 5/3 Brown	Sandy clay loam	4926; 4927; 8089 ; 8090	On plaza
25	Plaza-STP	16	30N,30W	50 cm	10YR 5/3 Brown	Sandy clay loam	4928	On plaza
26	Plaza-STP	17	25N,30W	70 cm	10YR 5/3 Brown	Sandy clay loam	8069	On plaza
27	Plaza-STP	18	20N,30W	50 cm	10YR 5/3 Brown	Sandy clay loam	4933	On plaza
28	Plaza-STP	19	15N,30W	40 cm	10YR 5/3 Brown	Sandy clay loam	4932	Off plaza
29	Plaza-STP	20	10N,30W	40 cm	10YR 5/3 Brown	Sandy clay loam	4934	Off plaza
30	Plaza-STP	21	5N,30W	40 cm	10YR 5/3 Brown	Sandy clay loam	4935	Off plaza
31	Plaza-STP	22	0N,30W	30 cm	10YR 5/3 Brown	Sandy clay loam	5023	Off plaza
32	Plaza-STP	23	15N,35W	50 cm	10YR 5/3 Brown	Sandy clay loam	8068	Off plaza
33	Plaza-STP	24	10N,35W	40 cm	10YR 5/3 Brown	Sandy clay loam	8070	Off plaza
34	Plaza-STP	25	0N,45W	40 cm	10YR 5/3 Brown	Sandy clay loam	8077	Off plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
35	Plaza-STP	26	5N,45W	40 cm	10YR 5/4 Yellowish Brown	Sandy clay loam	N/A	Off plaza
36	Plaza-STP	27	5N,35W	50 cm	10YR 5/3 Brown	Sandy clay loam	8072	Off plaza
37	Plaza-STP	28	0N,35W	40 cm	10YR 5/3 Brown	Sandy clay loam	8071	Off plaza
38	Plaza-STP	29	0N,40W	50 cm	10YR 5/3 Brown	Sandy clay loam	8078	Off plaza
39	Plaza-STP	30	5N,40W	40 cm	10YR 5/3 Brown	Sandy clay loam	8073	Off plaza
40	Plaza-STP	31	10N,40W	40 cm	10YR 5/3 Brown	Sandy clay loam	8080	Off plaza
41	Plaza-STP	32	15N,40W	40 cm	10YR 5/3 Brown	Sandy clay loam	8083	On plaza
42	Plaza-STP	33	10N,45W	30 cm	10YR 5/3 Brown	Sandy clay loam	8084	Plaza edge
43	Plaza-STP	34	15N,45W	40 cm	10YR 5/3 Brown	Sandy clay loam	8085	On plaza
44	Plaza-STP	35	20N,45W	50 cm	10YR 5/3 Brown	Loamy clay; sandy clay loam; clay	8177; 8179; 8180; 8181; 8182; 8183; 8184; 8185; 8186	On plaza
45	Plaza-STP	36	25N,45W	20 cm	10YR 5/3 Brown	Sandy clay loam	8091; 8092	On plaza
46	Plaza-STP	37	20N,40W	60 cm	10YR 5/3 Brown	Sandy clay loam	8087; 8088; 8093	On plaza
47	Plaza-STP	38	25N,40W	60 cm	10YR 5/3 Brown	Sandy clay loam	8094	On plaza
48	Plaza-STP	39	30N,45W	20 cm	10YR 5/3 Brown	Loamy clay	8095	On plaza
49	Plaza-STP	40	35N,45W	50 cm	10YR 5/3 Brown	Sandy clay loam	8097; 8098	On plaza
50	Plaza-STP	41	25N,55W	20 cm	10YR 5/3 Brown	Sandy clay loam	8109	On plaza
51	Plaza-STP	42	0N,60W	40 cm	10YR 5/3 Brown	Sandy clay loam	8103	Off plaza
52	Plaza-STP	43	0N,55W	40 cm	10YR 5/3 Brown	Clay loam	8101	Off plaza
53	Plaza-STP	44	0N,65W	15cm	10YR 5/3 Brown	Clay loam	8104	Off plaza
54	Plaza-STP	45	50N,45W	50 cm	10YR 5/3 Brown	Sandy clay loam	8105; 8107	On plaza
55	Plaza-STP	46	5N,55W	25 cm	10YR 5/3 Brown	Sandy clay loam	8108	Plaza edge
56	Plaza-STP	47	20N,55W	25 cm	10YR 5/3 Brown	Clay loam	8110	On plaza
57	Plaza-STP	48	15N,55W	30 cm	10YR 5/3 Brown	Clay loam	8134	On plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
58	Plaza-STP	49	5N,60W	45 cm	10YR 5/3 Brown	Clay loam	8111	Off plaza
59	Plaza-STP	50	10N,60W	45 cm	10YR 5/3 Brown	Clay loam - > sandy clay loam - > clay	8112	On plaza
60	Plaza-STP	51	15N,60W	45 cm	10YR 5/3 Brown	Clay loam	8114	On plaza
61	Plaza-STP	52	0N,50W	50 cm	10YR 5/3 Brown	Clay loam	8113	Off plaza
62	Plaza-STP	53	5N,50W	40 cm	10YR 5/3 Brown	Clay loam	8116	Off plaza
63	Plaza-STP	54	10N,50W	40 cm	10YR 5/3 Brown	Clay loam - hard packed w/ some sandy clay loam lenses	8117	Plaza edge
64	Plaza-STP	55	15N,50W	N/A	N/A	Roots	8136	On plaza
65	Plaza-STP	56	45N,30W	40 cm	10YR 5/3 Brown	Clay loam	8118	On plaza
66	Plaza-STP	57	20N,60W	25 cm	10YR 5/3 Brown	Clay loam	8120	On plaza
67	Plaza-STP	58	25N,60W	20 cm	10YR 5/3 Brown	Clay loam	8121	On plaza
68	Plaza-STP	59	N/A	N/A	N/A	N/A	N/A	N/A
69	Plaza-STP	60	35N,60W	20 cm	10YR 5/3 Brown	Clay loam	8124	On plaza
70	Plaza-STP	61	40N,60W	45 cm	10YR 5/3 Brown	Clay loam	8125; 8126	On plaza
71	Plaza-STP	62	45N,60W	65 cm	10YR 5/3 Brown	Clay loam followed by sandy clay loam	8129; 8196; 8197	On plaza
72	Plaza-STP	63	50N,60W	30 cm	10YR 5/3 Brown	Clay loam	8132; 8133	On plaza
73	Plaza-STP	64	55N,60W	50 cm	10YR 5/3 Brown	Sandy clay loam	8140	On plaza
74	Plaza-STP	65	40N,40W	45 cm	10YR 5/3 Brown	Sandy clay loam	8176	On plaza
75	Plaza-STP	66	40N,50W	60 cm	10YR 5/3 Brown	Clay loam --> Sandy clay loam	8167	On plaza
76	Plaza-STP	67	45N,45W	40 cm	10YR 5/3 Brown	Sandy clay loam	8166	On plaza
77	Plaza-STP	68	45N,50W	60 cm	10YR 5/3 Brown	Sandy clay loam	8148	On plaza
78	Plaza-STP	69	10N,55W	60 cm	10YR 5/3 Brown	Clay loam and sandy clay loam	8152; 8154; 8155; 8156; 8159	On plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
79	Plaza-STP	70	30N,50W	50 cm	10YR 5/3 Brown	Clay loam followed by sandy clay loam	8163	On plaza
80	Plaza-STP	71	25N,50W	30 cm	10YR 5/3 Brown	Clay loam	8164	On plaza
81	Plaza-STP	72	30N,55W	40 cm	10YR 5/3 Brown	Clay loam	8170	On plaza
82	Plaza-STP	73	35N,55W	30 cm	10YR 5/3 Brown	Clay loam	8171; 8173	On plaza
83	Plaza-STP	74	30N,40W	70 cm	10YR 5/3 Brown	Sandy clay loam	8188	On plaza
84	Plaza-STP	75	35N,40W	70 cm	20-40cm (10YR 5/3 Brown); @ 60cm (10YR 5/6 Yellowish Brown)	Sandy clay loam	8189	On plaza
85	Plaza-STP	76	30N,60W	40 cm	10YR 5/3 Brown	Sandy clay loam	8193	On plaza
86	Plaza-STP	77	35N,50W	37 cm	10YR 5/3 Brown	Clay loam	8191	On plaza
87	Plaza-STP	78	40N,55W	30 cm	10YR 5/3 Brown	Clay loam	8198	On plaza
88	Plaza-STP	79	20N,50W	55 cm	10YR 5/3 Brown	Clay loam at surface ; sandy clay loam at river cobble fill	8200; 8201	On plaza
89	Plaza-STP	80	40N,45W	75 cm	10YR 5/3 Brown	Sandy clay loam	8204	On plaza
90	Plaza-STP	81	35N,35W	60 cm	10YR 5/3 Brown	Sandy clay loam	8211	On plaza
91	Plaza-STP	82	40N,35W	60 cm	10YR 5/3 Brown	Clay loam throughout fill transitioning to sandy clay loam beneath plaza fill	8210	On plaza
92	Plaza-STP	83	0N,20W	50 cm	10YR 5/3 Brown	Sandy clay loam	8213	Off plaza
93	Plaza-STP	84	5N,20W	50 cm	10YR 5/3 Brown	Sandy clay loam	8215	Off plaza
94	Plaza-STP	85	10N,20W	50cm	10YR 5/3 Brown	Sandy clay loam	8218	Off plaza
95	Plaza-STP	86	15N,20W	50 cm	10YR 5/3 Brown	Sandy clay loam	8219	Off plaza
96	Plaza-STP	87	20N,20W	50 cm	10YR 5/3 Brown	Hard packed sandy clay loam	8222	Off plaza
97	Plaza-STP	88	25N,20W	50 cm	10YR 5/3 Brown	Hard packed sandy clay loam	8223	Off plaza
98	Plaza-STP	89	30N,20W	50 cm	10YR 5/3 Brown	Sandy clay loam	8225	Off plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
99	Plaza-STP	90	35N,20W	65 cm	10YR 5/3 Brown	Sandy clay loam from 10 - 45cm BGS. At 45cm BGS an alluvial deposit.	8227; 8229	Off plaza
100	Plaza-STP	91	0N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8233	Off plaza
101	Plaza-STP	92	40N,20W	60 cm	10YR 5/3 Brown	Sandy clay loam	8235	Off plaza
102	Plaza-STP	93	0N,10W	50 cm	10YR 5/3 Brown	Clay loam	8239	Off plaza
103	Plaza-STP	94	15N,10W	50 cm	10YR 5/3 Brown	Sandy clay loam	8240	Off plaza
104	Plaza-STP	95	10N,15W	40 cm	10YR 5/3 Brown	Clay loam	8256	Off plaza
105	Plaza-STP	96	30N,10W	40 cm	10YR 5/3 Brown	Sandy clay loam	8242	Off plaza
106	Plaza-STP	97	5N,15W	40 cm	10YR 5/3 Brown	Clay loam mixed w/ sandy clay loam	8245	Off plaza
107	Plaza-STP	98	45N,10W	40 cm	10YR 5/3 Brown	Sandy clay loam with alluvial lens at 40cm BGS	8246	Off plaza
108	Plaza-STP	99	45N,20W	50 cm	10YR 5/3 Brown	Clay loam transitioning to sandy clay loam	8248	Off plaza
109	Plaza-STP	100	40N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8250	Off plaza
110	Plaza-STP	101	35N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8260	Off plaza
111	Plaza-STP	102	20N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8258	Off plaza
112	Plaza-STP	103	45N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8252	Off plaza
113	Plaza-STP	104	15N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8254	Off plaza
114	Plaza-STP	105	30N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8265	Off plaza
115	Plaza-STP	106	50N,15W	50 cm	10YR 5/3 Brown	Sandy clay loam	8267	Off plaza
116	Plaza-STP	107	25N,15W	40 cm	10YR 5/3 Brown	Sandy clay loam	8262	Off plaza
117	Plaza-STP	108	55N,10W	50 cm	10YR 5/3 Brown	Sandy clay loam	8269	Off plaza
118	Plaza-STP	109	45N,35W	70 cm	Humus (10YR 5/4 Yellowish Brown) ; Clay Loam (10 YR 5/3 Brown) ; Sandy loam (7.5YR 5/4 Brown)	Clay loam humus, clay loam from 30 - 60 cm, sandy clay loam from 60 - 70 cm	8272; 8274	Plaza edge

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
119	Plaza-STP	110	45N,55W	50 cm	10YR 5/3 Brown	Sandy clay loam	8275; 8277	On plaza
120	Plaza-STP	111	60N,60W	60 cm	10YR 5/3 Brown	Humus to 15cm BGS, plaza fill from 15 - 40cm BGS, then sandy clay loam	8278; 8279	On plaza
121	Plaza-STP	112	65N,60W	60 cm	10YR 5/3 Brown	Humus to 5-10 cm, plaza fill from 10-40 cm, followed by sandy clay loam	8280	On plaza
122	Plaza-STP	113	70N,60W	60 cm	10YR 5/3 Brown	Humus to 7cm BGS; clay loam from 10-40 cm; sandy clay loam 40-60 cm	8282	Off plaza
123	Plaza-STP	114	75N,60W	60 cm	10YR 6/8 Brownish Yellow	Humus to 10 cm; clay from 10-60cm BGS	8284; 8286	Off plaza
124	Plaza-STP	115	80N,60W	60 cm	Above feature (10YR 5/3 Brown); Feature (10YR 4/2 Dark Greyish Brown)	Humus to 10cm BGS	8296; 8300 ; 8301	Off plaza
125	Plaza-STP	116	75N,55W	60 cm	10YR 5/3 Brown	Sandy clay loam	8292	Off plaza
126	Plaza-STP	117	80N,55W	60 cm	10YR 5/3 Brown	Sandy clay loam	8294	Off plaza
127	Plaza-STP	118	85N,55W	60 cm	10YR 5/3 Brown	Sandy clay loam	8307	Off plaza
128	Plaza-STP	119	90N,55W	60 cm	10YR 5/3 Brown	Sandy clay loam	8305	Off plaza
129	Plaza-STP	120	85N,60W	60 cm	10YR 5/3 Brown	Sandy clay loam	8309	Off plaza
130	Plaza-STP	121	90N,60W	60 cm	10YR 5/3 Brown	Sandy clay loam	8310	Off plaza
131	Plaza-STP	122	95N,65W	55 cm	10YR 5/3 Brown	Sandy clay loam	8313	Off plaza
132	Plaza-STP	123	90N,65W	60 cm	10YR 5/3 Brown	Sandy clay loam	8318	Off plaza
133	Plaza-STP	124	85N,65W	60 cm	10YR 5/3 Brown	Sandy clay loam	8315	Off plaza
134	Plaza-STP	125	95N,70W	60 cm	10YR 5/3 Brown	Sandy clay loam	8320	Off plaza
135	Plaza-STP	126	90N,70W	60 cm	10YR 5/3 Brown	Sandy clay loam	8321	Off plaza
136	Plaza-STP	127	85N,70W	40 cm	10YR 5/3 Brown	Sandy clay loam	8323	Building edge

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
137	Plaza-STP	128	70N,55W	50 cm	10YR 5/3 Brown	Sandy clay loam	8325	Off plaza
138	Plaza-STP	129	65N,55W	50 cm	10YR 5/3 Brown	Sandy clay loam	8327	On plaza
139	Plaza-STP	130	60N,55W	60 cm	10YR 5/3 Brown	Sandy clay loam	8330	On plaza
140	Plaza-STP	131	50N,55W	70 cm	10YR 5/3 Brown	Sandy clay loam	8361	On plaza
141	Plaza-STP	132	55N,55W	60 cm	10YR 5/3 Brown	Sandy clay loam	8358	On plaza
142	Plaza-STP	133	95N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8336	Off plaza
143	Plaza-STP	134	90N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8334	Off plaza
144	Plaza-STP	135	85N,75W	40 cm	10YR 5/3 Brown	Sandy clay loam	8332	Off plaza
145	Plaza-STP	136	95N,80W	50 cm	10YR 5/3 Brown	Sandy clay loam	8338	Off plaza
146	Plaza-STP	137	90N,80W	40 cm	0-40cm (10YR 5/3 Brown); 40-50cm (10YR 5/8 Yellowish Brown)	Clay loam shifting to sandy clay loam	8340	Off plaza
147	Plaza-STP	138	85N,80W	5 cm	10YR 5/6 Yellowish Brown	Building fill	8341	Building edge
148	Plaza-STP	139	95N,85W	N/A	N/A	N/A	8345	Off plaza
149	Plaza-STP	140	90N,85W	60 cm	10YR 5/3 Brown	Sandy clay loam	8348	Off plaza
150	Plaza-STP	141	85N,85W	60 cm	Sandy Clay Loam (10YR 5/3 Brown); Clay (10YR 5/8 Yellowish Brown)	Sandy clay loam to mottled clay	8350	Off plaza
151	Plaza-STP	142	95N,95W	60 cm	10YR 5/3 Brown	Sandy clay loam	8343	Off plaza
152	Plaza-STP	143	95N,90W	50 cm	10YR 5/3 Brown	Sandy clay loam	8352	Off plaza
153	Plaza-STP	144	90N,90W	50 cm	10YR 5/3 Brown	Sandy clay loam	8353	Off plaza
154	Plaza-STP	145	85N,90W	60 cm	10YR 5/3 Brown	Sandy clay loam	8356	Off plaza
155	Plaza-STP	146	90N,95W	60 cm	10YR 5/3 Brown	Sandy clay loam	8363	Off plaza
156	Plaza-STP	147	85N,95W	50 cm	10YR 5/3 Brown	Sandy clay loam - compact	8365	Off plaza
157	Plaza-STP	148	80N,95W	60 cm	10YR 5/3 Brown	Sandy clay loam	8366	Off plaza
158	Plaza-STP	149	75N,95W	60 cm	10YR 5/3 Brown	Compact sandy clay loam	8369	Off plaza
159	Plaza-STP	150	85N,100W	60 cm	10YR 5/3 Brown	Sandy clay loam	8371	Off plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
160	Plaza-STP	151	80N,105W	60 cm	10YR 5/3 Brown	Sandy clay loam	8373	Off plaza
161	Plaza-STP	152	55N,70W	50 cm	10YR 5/3 Brown	Sandy clay loam	8377	On plaza
162	Plaza-STP	153	60N,70W	50 cm	10YR 5/3 Brown	Sandy clay loam	8374	On plaza
163	Plaza-STP	154	10N,75W	50 cm	10YR 5/3 Brown	Sandy clay loam	8378	On plaza
164	Plaza-STP	155	15N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8379	On plaza
165	Plaza-STP	156	20N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8380	On plaza
166	Plaza-STP	157	25N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8382	On plaza
167	Plaza-STP	158	30N,75W	30cm	10YR 5/3 Brown	Sandy clay loam	8383	On plaza
168	Plaza-STP	159	35N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8384	On plaza
169	Plaza-STP	160	40N,75W	55 cm	10YR 5/3 Brown	Sandy clay loam	8385	On plaza
170	Plaza-STP	161	50N,75W	50 cm	10YR 5/3 Brown	Sandy clay loam	8386	On plaza
171	Plaza-STP	162	10N,80W	50 cm	10YR 5/3 Brown	Sandy clay loam	8387	Off plaza
172	Plaza-STP	163	5N,75W	60 cm	10YR 5/3 Brown	Sandy clay loam	8391	On plaza
173	Plaza-STP	164	0N,75W	60 cm	0-35cm (10YR 5/3 Brown); 35-60cm (10YR 5/8 Yellowish Brown)	Sandy clay loam	8388	Off plaza
174	Plaza-STP	165	0N,70W	60 cm	10YR 5/3 Brown	Sandy clay loam	8392	Off plaza
175	Plaza-STP	166	5N,70W	60 cm	10YR 5/3 Brown	Sandy clay loam	8394	On plaza
176	Plaza-STP	167	5N,65W	30 cm	10YR 5/3 Brown	Loam	8397	Off plaza
177	Plaza-STP	168	10N,65W	50 cm	10YR 5/3 Brown	Sandy clay loam	8398	On plaza
178	Plaza-STP	169	15N,65W	60 cm	10YR 5/3 Brown	Sandy clay loam	8399; 8401	On plaza
179	Plaza-STP	170	50N,90W	60 cm	10YR 5/3 Brown	Sandy clay loam	8405; 8406	On plaza
180	Plaza-STP	171	50N,85W	50 cm	10YR 5/3 Brown	Clay loam	8407	On plaza
181	Plaza-STP	172	20N,65W	55 cm	10YR 5/3 Brown	Sandy clay loam	8402	On plaza
182	Plaza-STP	173	35N,65W	40 cm	10YR 5/3 Brown	Sandy clay loam	8403	On plaza
183	Plaza-STP	174	40N,65W	50 cm	10YR 5/3 Brown	Sandy clay loam	8404	On plaza
184	Plaza-STP	175	70N,105W	50cm	10YR 5/3 Brown	Sandy clay loam	8412	Off plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
185	Plaza-STP	176	75N,105W	50 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8410	Off plaza
186	Plaza-STP	177	85N,105W	50 cm	10YR 5/3 Brown	Sandy loam	8408	Off plaza
187	Plaza-STP	178	65N,105W	60 cm	10YR 5/3 Brown	Sandy clay loam	8414	Off plaza
188	Plaza-STP	179	60N,105W	50 cm	10YR 5/3 Brown	Sandy clay loam	8415	Off plaza
189	Plaza-STP	180	55N,75W	50 cm	10YR 5/3 Brown	Sandy clay loam	8417	On plaza
190	Plaza-STP	181	10N,70W	30 cm	N/A	N/A	8419	Off plaza
191	Plaza-STP	182	15N,70W	50 cm	10YR 5/3 Brown	Loam	8421	On plaza
192	Plaza-STP	183	0N,90W	60 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8426	Off plaza
193	Plaza-STP	184	5N,90W	50 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8424	Off plaza
194	Plaza-STP	185	0N,95W	60 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8432	Off plaza
195	Plaza-STP	186	5N,95W	50 cm	10YR 5/3 Brown	Sandy clay loam	8428	Off plaza
196	Plaza-STP	187	60N,75W	50 cm	10YR 5/3 Brown	Sandy clay loam	8434; 8435	On plaza
197	Plaza-STP	188	25N,65W	50 cm	10YR 5/3 Brown	Sandy clay loam	8440	On plaza
198	Plaza-STP	189	30N,65W	40 cm	10YR 5/3 Brown	Sandy clay loam	8441	On plaza
199	Plaza-STP	190	45N,65W	30 cm	10YR 5/3 Brown	Sandy clay loam	8442	On plaza
200	Plaza-STP	191	60N,80W	50 cm	10YR 5/3 Brown	Sandy clay loam	8437; 8438	On plaza
201	Plaza-STP	192	50N,65W	60 cm	10YR 5/3 Brown	Sandy clay loam	8443	On plaza
202	Plaza-STP	193	60N,65W	40 cm	10YR 5/3 Brown	Sandy clay loam	8445	On plaza
203	Plaza-STP	194	65N,65W	50 cm	10YR 5/3 Brown	Sandy clay loam	8447	On plaza
204	Plaza-STP	195	35N,105W	60 cm	Sandy Clay Loam (10YR 5/3 Brown); Clay (5YR 5/6 Yellowish Red)	Sandy clay loam transitioning to clay	8451	Off plaza
205	Plaza-STP	196	40N,105W	60 cm	10YR 5/3 Brown	Sandy clay loam	8449	Off plaza
206	Plaza-STP	197	85N,110W	60 cm	10YR 5/3 Brown	Sandy clay loam	8453	Off plaza
207	Plaza-STP	198	80N,110W	60 cm	10YR 5/3 Brown	Sandy clay loam	8454	Off plaza
208	Plaza-STP	199	50N,95W	50 cm	0-35cm (10YR 5/3 Brown); 35-50cm (10YR 5/6 Yellowish Brown)	Sandy clay loam	8462	Off plaza
209	Plaza-STP	200	55N,80W	50 cm	10YR 5/3 Brown	Sandy clay loam	8465	On plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
210	Plaza-STP	201	0N,80W	60 cm	10YR 5/3 Brown	Sandy clay loam	8457	Off plaza
211	Plaza-STP	202	5N,80W	60 cm	10YR 5/3 Brown	Sandy clay loam	8460	Off plaza
212	Plaza-STP	203	0N,85W	60 cm	10YR 5/3 Brown	Sandy clay loam	8461	Off plaza
213	Plaza-STP	204	50N,80W	40 cm	10YR 5/3 Brown	Sandy clay loam	8466	Off plaza
214	Plaza-STP	205	55N,65W	50 cm	10YR 5/3 Brown	Sandy clay loam	8468; 8469	On plaza
215	Plaza-STP	206	75N,110W	60 cm	10YR 5/3 Brown	#N/A	8470	Off plaza
216	Plaza-STP	207	20N,70W	25 cm	N/A	N/A	8472	On plaza
217	Plaza-STP	208	25N,70W	50 cm	10YR 5/3 Brown	Sandy clay loam	8473; 8474	On plaza
218	Plaza-STP	209	30N,70W	40 cm	10YR 5/3 Brown	Sandy clay loam	8477	On plaza
219	Plaza-STP	210	35N,70W	50 cm	10YR 5/3 Brown	Sandy clay loam	8478	On plaza
220	Plaza-STP	211	40N,70W	30 cm	N/A	N/A	8482	On plaza
221	Plaza-STP	212	45N,70W	50 cm	10YR 5/3 Brown	Sandy clay loam	8483	On plaza
222	Plaza-STP	213	50N,70W	60 cm	10YR 5/3 Brown	Sandy clay loam	8487	On plaza
223	Plaza-STP	214	65N,70W	30 cm	10YR 5/3 Brown	Sandy clay loam	8489	On plaza
224	Plaza-STP	215	45N,80W	60 cm	10YR 5/3 Brown	Sandy clay loam	8490	On plaza
225	Plaza-STP	216	5N,85W	60 cm	10YR 5/3 Brown	Sandy clay loam	8492	Off plaza
226	Plaza-STP	217	10N,85W	50 cm	10YR 5/3 Brown	Sandy clay loam	8495	Off plaza
227	Plaza-STP	218	10N,90W	50 cm	10YR 5/3 Brown	Sandy clay loam	8496	Off plaza
228	Plaza-STP	219	10N,95W	40 cm	10YR 5/3 Brown	Sandy clay loam	8498	Off plaza
229	Plaza-STP	220	0N,100W	50 cm	10YR 5/3 Brown	Sandy clay loam	8501	Off plaza
230	Plaza-STP	221	5N,100W	60 cm	10YR 5/3 Brown	Sandy clay loam	8504	Off plaza
231	Plaza-STP	222	10N,100W	50 cm	10YR 5/3 Brown	Sandy clay loam	8514	Off plaza
232	Plaza-STP	223	15N,100W	60 cm	10YR 5/3 Brown	Sandy clay loam	8515	Off plaza
233	Plaza-STP	224	30N,105W	40 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8523; 8524 ; 8525	Off plaza
234	Plaza-STP	225	80N,100W	40 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8532	Off plaza
235	Plaza-STP	226	75N,100W	35 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8531	#N/A

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
236	Plaza-STP	227	55N,100W	50 cm	0-20cm (10YR 5/3 Brown); 20-50cm (10YR 4/4 Dark Yellowish Brown)	Clay loam	8529	Off plaza
237	Plaza-STP	228	55N,105W	50 cm	0-20cm (10YR 5/3 Brown); 20-50cm (10YR 5/4 Yellowish Brown)	Loam (0-20 cm); Sandy Clay loam (20-50 cm)	8528	Off plaza
238	Plaza-STP	229	25N,105W	60 cm	10YR 5/3 Brown	Sandy clay loam	8522	Off plaza
239	Plaza-STP	230	0N,105W	60 cm	0-30cm (10YR 5/3 Brown); 30-60cm (10YR 5/6 Yellowish Brown)	Sandy clay loam	8518	Off plaza
240	Plaza-STP	231	5N,105W	50 cm	0-30cm (10YR 5/3 Brown); 30-50cm (10YR 5/6 Yellowish Brown)	Sandy clay loam	8519	Off plaza
241	Plaza-STP	232	20N,105W	50 cm	0-35cm (10YR 5/3 Brown); 35-50cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8520	Off plaza
242	Plaza-STP	233	40N,110W	50 cm	10YR 5/3 Brown	Sandy clay loam	8526	Off plaza
243	Plaza-STP	234	45N,110W	50 cm	0-50cm (10YR 5/3 Brown); at 50cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8527	Off plaza
244	Plaza-STP	235	65N,110W	50 cm	10YR 5/3 Brown	Clay loam	8537; 8538	Off plaza
245	Plaza-STP	236	70N,110W	60 cm	0-50cm (10YR 5/3 Brown); 50-60cm (10YR 5/6 Yellowish Brown)	Loam (0-30 cm); Sandy clay loam (30-60 cm)	8534	Off plaza
246	Plaza-STP	237	60N,110W	60 cm	10YR 5/3 Brown	Loam (0-30 cm); Sandy clay loam (30-60 cm)	8537	Off plaza
247	Plaza-STP	238	55N,110W	50 cm	0-40cm (10YR 5/3 Brown); 40-50cm (10YR 5/6 Yellowish Brown)	Sandy clay loam	8540; 8541 ; 8542	Off plaza
248	Plaza-STP	239	10N,105W	60 cm	10YR 5/3 Brown	Sandy clay loam	8543	Off plaza
249	Plaza-STP	240	15N,105W	60 cm	0-10cm (10YR 5/3 Brown); 10-60cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8544	Off plaza
250	Plaza-STP	241	0N,110W	60 cm	10YR 5/3 Brown	Sandy clay loam	8546	Off plaza
251	Plaza-STP	242	5N,110W	60 cm	0-10cm (10YR 5/3 Brown); 10-60cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8547	Off plaza

Op	Subop	STP#	Lot	Total Depth (cm)	Matrix Description		Associated Photos	On/Off Plaza
					Colour (Munsell)	Texture		
252	Plaza-STP	243	10N,110W	60 cm	0-10cm (10YR 5/3 Brown); 10-60cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8548	Off plaza
253	Plaza-STP	244	30N,110W	30 cm	7.5YR 6/8 Reddish Yellow	Sandy clay loam	8551; 8552	Off plaza
254	Plaza-STP	245	35N,110W	60 cm	5YR 5/6 Yellowish Red	Loam (0-10 cm); Sandy Clay Loam (10-60 cm)	8550	Off plaza
255	Plaza-STP	246	25N,110W	60 cm	5YR 5/6 Yellowish Red	Loam (0-10 cm); Sandy Clay Loam (10-60 cm)	8554	Off plaza
256	Plaza-STP	247	20N,110W	60 cm	10YR 5/3 Brown	Sandy clay loam	8555	Off plaza
257	Plaza-STP	248	15N,110W	60 cm	0-50cm (10YR 5/3 Brown); 50-60cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8556	Off plaza
258	Plaza-STP	249	50N,110W	50 cm	10YR 5/3 Brown	Sandy clay loam	8557	Off plaza
259	Plaza-STP	250	50N,105W	50 cm	0-40cm (10YR 5/3 Brown); 40-50cm (10YR 5/6 Yellowish Brown)	Sandy clay loam	8559	Off plaza
260	Plaza-STP	251	50N,100W	60 cm	0-40cm (10YR 5/3 Brown); 40-60cm (5YR 5/6 Yellowish Red)	Sandy clay loam	8561	Off plaza
261	Plaza-STP	252	15N,115W	40 cm	10YR 5/3 Brown	Sandy clay loam	8565	Off plaza
262	Plaza-STP	253	45N,105W	60 cm	10YR 5/3 Brown	Sandy clay loam	8564	Off plaza
263	Plaza-STP	254	30N,115W	40 cm	10YR 5/6 Yellowish Brown	Sandy clay loam	8569	Off plaza
264	Plaza-STP	255	45N,115W	40 cm	10YR 5/3 Brown	Sandy clay loam	8573	Off plaza
265	Plaza-STP	256	60N,115W	60 cm	10YR 5/3 Brown	Sandy clay loam	8570	Off plaza
266	Plaza-STP	257	75N,115W	40 cm	10YR 5/3 Brown	Sandy clay loam	8571	Off plaza
267	Plaza-STP	258	90N,115W	40 cm	10YR 5/3 Brown	Sandy clay loam	8572	Off plaza

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Chapter 5. Potential Agro-Engineering in the Alabama Foothills: Operation 7 at Feature L006

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During the SCRAP 2015 Phase I reconnaissance field season, survey team members were led onto Crown Land in the southwestern foothills of the Alabama area (roughly 70 m above the alluvial valley bottom) by our community liaison, Mr. H. Chiac Sr., who wished to show us what he believed to be a human-made granite feature. This feature, later labeled L006 (Figure 5.1; see also Figure 1.3, this volume), was covered in dense vegetation (broad-leaf forest) and was thought at the time to represent a square, cell-like feature or pen (~ 3 m x 2.5 m) made of granite boulders with additional boulders piled within (Tibbits and Peuramaki-Brown 2015: 94-96, fig. 4.10). This same locale was revisited in 2018 by SCRAP geologist Dr. Joanna Potter, where she sampled the local granite (Sample B-44) and classified it as Granite Type IX (Potter 2018: 93, map 1).

Figure 5.1: Location of L006 feature (Operation 7) at Alabama in the lower foothills zone.

Initial ideas concerning the possible function of the L006 feature included a 'paddock' for the collection of granite boulders from the nearby streambed—for later use in the manufacture of granite architectural blocks—or part of a possible agro-engineering feature (e.g., agricultural terrace; Beach et al. 2002:373). Overall, the roughly linear organization of granite materials suggested it may have been a human-made feature; although, the presence of linear rock alignments/formations can also be natural. As archaeologists, it is also important we remember that such binary views are overly simplistic, and that even natural formations can have great cultural significance. Local stories about the feature were told to us by a farmer currently working this area of the foothills, which included the hearing of people or animals talking in the vicinity, but upon investigation no one was to be found. Another story included that of a tall man with a red hat who was spotted nearby—a possible *duende* sighting. A visiting missionary-farmer from Guatemala once told the local farmer that the feature was "important" and to take care not to disturb it; the local farmer told us he had not disturbed this area until now (his clearing of the area for planting/tending), but that he was now curious about the feature and wished to know more about it as he is interested in the combined ecology and tourism potential of the broader area.

In 2019, it was decided—based on related research questions surrounding the subsistence practices of ancient Alabamans as well as expressed local interest—that we would test the feature to attempt to determine its age and function, and to decide if future investigations were warranted. This testing program was designated SCRAP Operation 7 (Op 7). The excavations and documentation reported here were directed/ supervised by Dr. Meaghan Peuramaki-Brown (MPB) and assisted by Higinio Chiac Jr. (HCJr), Erin Niki Phillips (ENP), and Frank Tzib (FT). Recording of excavations were conducted using the forms, guides, and systems described in Appendix B of this volume, and all matrix was screened using ¼-inch mesh, unless otherwise indicated. Summaries of excavation contexts are provided below, including individual lot data presented in Table 5.1. Copies of all associated paperwork, drawings, and photos are on file at the Belize Institute of Archaeology. Artifacts are currently in storage in Maya Centre, Stann Creek District, Belize.

Operation 7

When we arrived at the L006 feature in 2019, we found much of the stream bank area to have been cleared of some large trees and significant underbrush. This was done for agricultural and resource development purposes (mentioned above)—village members are permitted to use surrounding Crown Land for such purposes. The area was currently being cultivated for jipijapa palm, cacao (further downslope), and bamboo (Figure 5.2). Such crops serve as construction and crafting materials (e.g., bamboo, jipijapa), foods (e.g., cacao, jipijapa), and attractors for birds and animals that can then be hunted (e.g., jipijapa), among many other purposes (Saqui 2012:120).

Figure 5.2: From left to right, cacao, jipijapa palm, and bamboo crops growing nearby L006.

The granite feature was considerably more visible than in 2015 and was discovered to actually be the south end of a much longer—at least 4.5-5 m long—north-south (8°W of mN) stone alignment of stacked boulders (Figure 5.3), roughly 1.5-2 m wide, running along the west bank of the most southwesterly stream of the Alabama area, right at the edge of the drop down to the stream (to the east). Large tree-fall at the north end of the feature prevented us from determining the full length of the feature. Again, the rough alignment of stone was thought to possibly be human-made, though preliminary searches around the feature recovered no Pre-Columbian artifacts.

Figure 5.3: From left to right, view of the south end of the feature from the south; team mapping the feature; and view looking up toward the south end of the feature from the stream bottom (northeast).

Suboperations 7A and 7B

Suboperation (Subop) 7A was a 1m x 1m excavation unit placed atop (upslope) the feature, capturing the exposed west side and part of the ground surface (possible terrace plot). Subop 7B was a 1m x 2m excavation unit attached to the east side (downslope, toward stream) of Subop 7A, covering the east side/face of the feature. This total excavation area of 1m x 3m was positioned perpendicularly across the prominent feature, towards its southern end. A total of only 0.45m^3 of matrix was removed from these excavations due to the small size of the test excavations and many large/overlapping granite boulders. These small excavations served only

to justify whether or not to return in future seasons for more extensive and intensive research of possible ancient agro-engineering activities/features in the foothills.

Associated excavation drawings on file at the Institute of Archaeology in Belmopan include SCRAP2019-DN001 (top plan; Figure 5.5 photo) and DN002 (profile; Figure 5.4). Excavation unit corners were captured using a mapping-grade Trimble Juno GPS unit (coordinates on file with Institute of Archaeology and part of SCRAP GIS).

Humus. A thin humus layer, averaging 10cm thick, was removed from both suboperations as Lots 7A-1 (atop the feature and level soil zone) and 7B-1 ('terrace' face and downslope toward the stream). The matrix consisted primarily of loamy sand to sandy loam with many pebbles and small cobbles and was dark brown to dark olive brown in colour. A single, non-diagnostic pottery sherd was recovered from the southwest corner of Lot 7B-1, amid the boulders atop the feature. We completed excavation of the lots once we had exposed the alluvial granite boulders of the feature (a sample was collected for future comparison/study using our granite type collection) throughout most of Subop 7B and the very east edge of Subop 7A, as well as exposing a different coloured/textured matrix throughout the rest of Subop 7A and the SW corner of Subop 7B. No clear pattern was visible in the exposed boulder arrangement. Small charcoal flecks were noted in Lot 7B-1, but their proximity to the ground surface (unsealed) suggested them to be modern.

Bulk artifact materials recovered include a single ceramic sherd (non-diagnostic). Associated excavation photos include Black Camera 117-3267 to 3756 (3D model, start of excavations); 117-3761 to 3765 and 119-3793, 94, 96-99 (top of lots); 119-3781, 82, 84, 85 and 120-3801 to 3806 (bottom of lots).

Unknown Subsoil (Terrace Plot?). As mentioned above, a change in matrix colour and texture was noted in Subop 7A, to the west of the large granite boulders, and was determined to be an unknown subsoil (Lots 7A-2 and 7B-2). It is possible this soil represents the actual terrace plot. The removed matrix (average. 6.5cm thick) consisted of a very dark brown to black sandy loam/loam, with some small alluvial cobbles and pebbles. These lots were closed when we exposed larger alluvial cobbles throughout. It remained unclear if this was a natural or cultural break. A cut/hewn granite block was encountered in Lot 7B-2 and the east end of Lot 7A-2—part of the 'jumble' of boulders. Small flecks of charcoal were encountered in Lot 7A-2, but these were determined to be too close to the surface in unsealed context to warrant collection.

No bulk artifacts were recovered, but a quartzite hammerstone (Cat. #10465-OT001) was found in Lot 7B-2, in the same area as the pottery sherd found within the humus. Associated excavation photos include Black Camera 119-3781, 82, 84, 85 and 120-3801 to 3806 (top of lots); 119-3786, 89, 90 to 92 and 120-3809, 12, 13 to 17 (bottom of lots); 120-3818 to 4271 (3D model, bottom of lots).

Feature/Construction Core 1(?). Beneath the unknown subsoil, we encountered a layer of alluvial, very small boulders and large cobbles. We then removed these materials (average 6cm thick) within a 0.5m x 1.2m profile window (Lot 7A/B-3) along the south half of Subop 7A and the SW quadrant of Subop 7B. The removed matrix included dark-yellowish-brown loamy sandy. Excavations ended when we encountered a denser layer of small cobbles, pebbles, and sandy clay loam.

No artifacts were recovered from this context. Associated excavation photos include Black Camera 120-3809, 12 to 17 (top of lot); 120-3813 to 4271 (3D model of bottom of lot); 120-4275, 76, 79 to 84 (bottom of lot).

Feature/Construction Core 2(?). Beneath the very small boulder and large cobble 'core' layer, we continued down through the denser small cobble/pebble and sandy clay loam layer (Lot 7A/B-4), that was of a dark-brown colour. The matrix was found to be much smoother than that above (clay content). Excavations ceased when we recovered a sealed charcoal sample and large cobbles and a sandier matrix, which was thought to be the surface of the alluvial bank of the nearby stream. We decided that our priority would be to date the charcoal first before proceeding with any further disturbance of the feature—particularly as it remained unclear as to whether or not it represented a natural or cultural formation. A 2018 Belizean five-cent piece was placed at the bottom of excavations prior to backfilling (no 2019 pieces were available).

No artifacts were recovered. The charcoal sample was collected (Cat. #10465-CB001) and submitted for dating at the A.E. Lalonde AMS Laboratory in Ottawa, Canada; the sample returned a modern date (1990-1992 cal AD [91.6%]; Lab ID UOC-12570). Associated excavation photos include Black Camera 120-4275, 76, 79 to 84 (top of lot); 121-4840 to 52 (bottom of lot; end of excavations); 121-4802 to 32 (3D model for end of excavations).

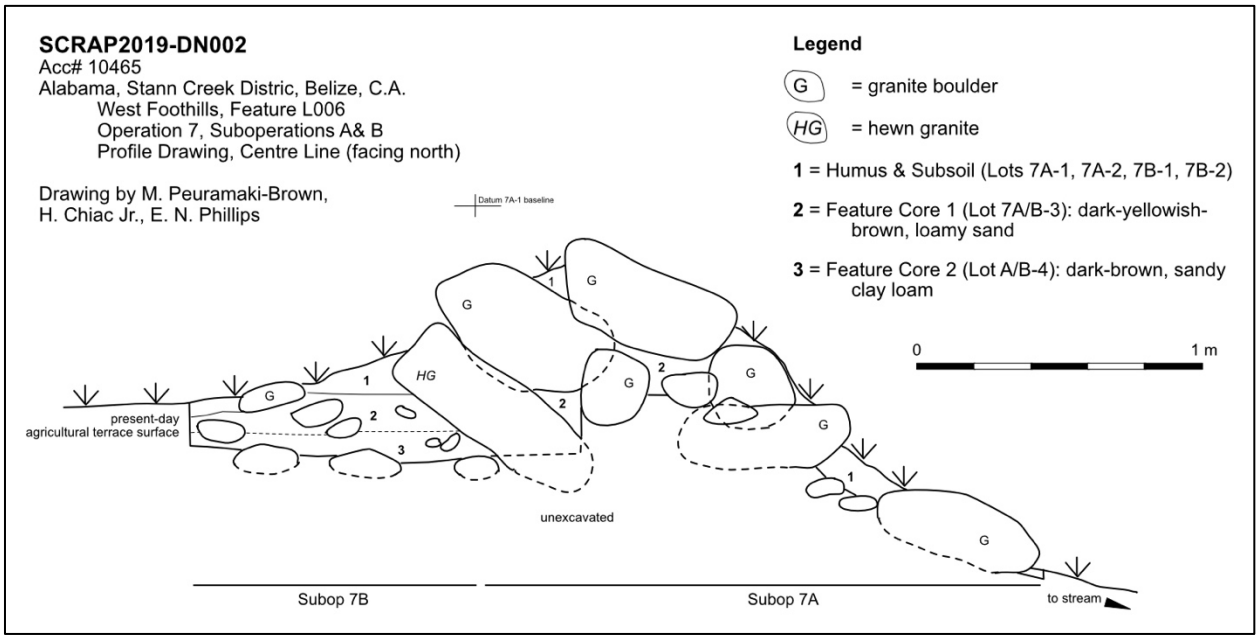

Figure 5.4: Profile drawing of L006 feature in Subops 7A and 7B, facing north.

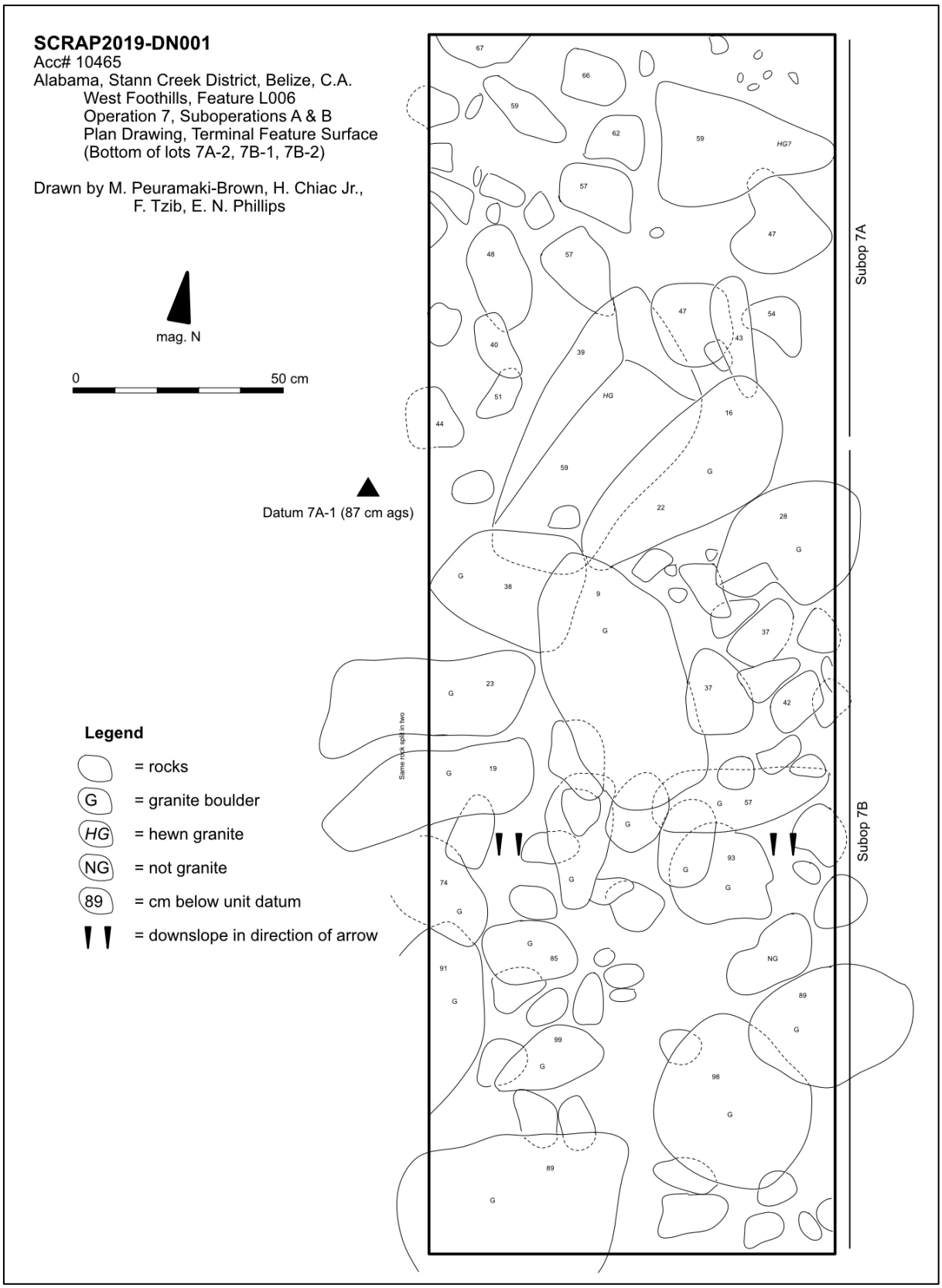

Figure 5.5: Plan drawing of Subops 7A and 7B, terminal feature.

Discussion and Future Directions

Following these extremely preliminary test excavations, our conclusions remain tentative regarding the identity and function of the L006 feature. At this point, arguments can be made for it being either a natural (i.e., alluvial bank) or cultural (i.e., agro-engineering terrace) feature, or representing both (e.g., shored up alluvial bank).

Natural Feature

The stream along which the feature is located would be classified as a *small channel*,

> where individual clasts [e.g., cobbles, boulders] may protrude above the water surface and significantly affect local flow processes…. Very often, the morphology of these channels can be locally controlled by the exposed bedrock…. Bed sediments can be mobilized only during extreme flood events. The very steep slopes promote relatively high velocities that sometimes may be sufficient to dislodge even very large grains (Robert 2003: 15).

Does the feature represent a natural build-up of large clasts from an extreme flooding event (perhaps from the 1990s), which happen to be in a more linear formation? The presence of larger boulder material atop the bank could be the product of mobilized materials during extreme flood events (i.e., surging waters coming down the foothills); Stann Creek District receives the second highest rainfall in the country (over 2000 mm/year), with both tropical rainforest and tropical monsoon climates represented. The somewhat stratified nature of the "core" deposits suggests we may not be dealing solely with flooding deposits, where we might expect greater mixing of clasts—though this is far from transparent, barring a broader survey by an alluvial geologist/geographer.

Cultural Feature

Some cultural materials were found in association with the L006 feature. As mentioned above, a single ceramic sherd and a quartzite hammerstone were found amid the large boulders of the feature—within the unknown subsoil stratum. Additionally, a cut/hewn stone was encountered within the feature 'pile.' The presence of all three artifacts could be related to feature construction, general activity in the area, or even washdown from further upstream at a currently undocumented cultural activity locale.

Just to the south of the SW corner of Subop 7B, at the southern end of the feature, we also encountered a granite boulder with possible pecking depressions (a.k.a. percussion scars, though in no clear pattern; Figure 5.6)—reminiscent of various processing activities (e.g., stone shaping) at Alabama (Pennanen and Peuramaki-Brown 2016: 72-73, fig. 4.4), with similar results obtained from our recent experimental research into shaping granite (see Chapter 1 of this volume), as well as petroglyphic elements at neighbouring sites (Wanyerka 1999).

Figure 5.6: Pecking/percussion scars on feature boulder.

It remains unclear as to whether or not the "core" material of the L006 feature is cultural (e.g., terrace 'fill') or a natural deposit, especially given the general lack of artifact materials recovered from within this context; this is made even more frustrating given that most architectural construction cores at Alabama do not include artifact/ debris material (Peuramaki-Brown and Morton 2019).

It is possible that the feature represents an agro-engineering element, such as a terrace. Terraces have multiple possible functions, including creating stable planting surfaces (larger/ deeper beds on sloping land); improving soil moisture conditions conducive to plant growth; controlling erosion by slowing the flow of water; preventing leaching of shallow soils during periods of heavy rain; and diverting the flow of water along the terraces or away from downstream fields or springs (Beach et al. 2002; Saqui 2012:38-39; Turner 1983; Vernon 1998). These help to make areas of steep escarpments and thin soils usable—both of which are features of the eastern Maya Mountains foothills. They can also serve as a way of bringing perceived 'marginal' regions into long-term production, as agro-engineering represents a form of localized adaptation and intensive and sustainable farming, particularly in areas where valley bottom sediments are high in clay content and not great in drainage, thus prone to flooding (as is the case at Alabama). Many ancient terraces "still function after a thousand years under tropical forests and milpas, thereby implying a practical technology with modern, 'grass roots' utility" (Beach et al. 2002:373).

Agro-engineering terraces typically consists of three to four parts—face, core, retaining wall, and terrace plot—and come in multiple forms (e.g., Healy et al. 1983). The L006 feature is most similar in appearance to form B in Healy et al. (1983: fig. 6), and the weir form in Beach et al. (2002: fig. 2)—"a simple, buttressed, boulder-wall architectural form" (Beach et al. 2002:381), which is a common form worldwide (Beach and Dunning 1995)—though it is possible that future expansion of excavation further west of the feature could find a parallel retaining wall (see Macrae and Iannone 2016).

As mentioned above, this possible plot terrace area (represented by the humus and unknown subsoil—both types of loam or fertile soil of clay and sand containing humus) is currently being cultivated for jipijapa palm and was identified by the local farmer as a productive

area due to the deeper soils. This is interesting, as many farmers in the Alabama area identify the western foothills around Alabama as having thinner soils that would benefit from terracing, while the eastern foothills are thicker and not necessarily in need of terracing (S. Chiac, personal communication, 2018; J. Jordan, personal communication, 2019); these differences are related to underlying bedrock and slope. This suggests the potential for diverse agro-engineering strategies in different areas of the surrounding foothills of Alabama. Approximately 10 m north-west to west of the feature (upslope), we identified another low alignment of granite boulders peeking up through the ground surface; upslope from this was the aforementioned bamboo grove. Thus, we may be dealing with a series of terraces that were serving to create wider plots for agriculture, with thicker soils, as compared to other parts of the western foothills. Terracing does not appear to be practiced by farmers living in the area today, but they may be unknowingly taking advantage of such ancient features, as may be the case at L006 and the farmer now working the surrounding soils. The local farmer at L006 also told us that they find 'wild' cacao and chilis growing on the west slopes around Alabama—possibly remnants of at least the presence of domesticated crops and ancient agricultural activity in this area.

Dunham et al. (1995: 2) noted that "[a] large hydraulic complex with massive terraces…was found approximately 2.2 km to the southwest [of Muklebal Tzul], at the origin of the Bladen proper. It probably served as an agricultural support facility. While common in the north, such architectural features and terracing are scarce in the southern Maya Mountains." If the L006 feature were an agricultural terrace, it would be the first to have been documented in the Stann Creek District and considered an example of an infield agricultural holding within an infield-outfield system, as this field/ plot would have been located within easy walking distance of the Alabama settlement (less than a half hour walk from the currently identified settlement zone edge; Chase and Chase 1998; Killion et al. 1989). As far as we are aware, terracing is not a practice adopted by the modern-day villagers of Maya Mopan, but it is possible modern farmers may be unknowingly taking advantage of such ancient agro-engineering systems.

Natural and Cultural Feature

Another option is that this feature represents both a natural and cultural formation. The foothills of the Alabama area rise to a max of 400 m above the valley bottom and are used today and in recent history for milpa farming, firewood collection, logging, and hunting (TMCC/TAA 1997 112-113). The streams coming out of the foothills are steep and dramatic; water runoff is extremely high and erosive after heavy rains. In order to preserve any existing fertile agricultural areas in the foothills, it would make sense to shore up existing, active stream banks (watercourse) in order to simultaneously prevent bank erosion, loss of field land for cultivation, and building up soil depth in a plot.

Recommendations

Based on the aforementioned findings, we recommend that future research endeavours focus on agro-engineering features in the foothills surrounding Alabama, including following up on additional locally reported features (e.g., survey, interviewing, mapping, and archaeological testing)—aided by future Lidar survey data—as well as a geomorphological and hydrological study of the foothills, and geochemical and productivity studies of the soils of possible terrace plots. Recent Lidar data acquisition by SCRAP for the area around Pearce Ruins—roughly 10 km to the north of Alabama—will also help to develop a better understanding of possible

diversity in agro-engineering efforts of the ancient Maya of the eastern slopes of the Maya Mountain.

Table 5.1: Excavation lots for Operation 7, Suboperations A & B

Context					Metrics					Matrix Description		
Op	**Subop**	**Lot**	**Designation**	**Ceramic/ C14 Date**	**N/S (m)**	**E/W (m)**	**Area (m2)**	**Avg thick (m)**	**Vol. (m3)**	**Colour**	**Texture**	**Inclusions**
7	A	1	Humus	N/A	1.00	1.00	1.00	0.11	0.11	2.5Y 3/3 Dark Olive Brown	Loamy Sand	70% loamy sand; 15% roots/leaves/ 15% pebbles/small cobbles
7	B	1	Humus (downslope)	N/A	1.00	2.00	2.00	0.09	0.19	7.5YR 3/2 Dark Brown	Sandy Loam	70% sandy loam; 20% roots; 10% pebbles/cobbles
7	A	2	Unknown subsoil	N/A	1.00	1.00	1.00	0.05	0.05	5Y 2.5/2 Black	Loam	60% loam; 20% roots; 20% pebbles/small cobbles
7	B	2	Unknown subsoil	N/A	0.48	0.49	0.24	0.08	0.02	10YR 2/2 Very Dark Brown	Sandy Loam	60% sandy loam; 20% roots/leaves; 20% pebbles/cobbles
7	A/B	3	Feature Core 1?	N/A	0.50	1.20	0.60	0.06	0.03	10YR 3/4 Dark Yellowish Brown	Loamy Sand	50% loamy sand; 30% pebbles/small cobbles; 20% large cobbles/small boulders
7	A/B	4	Feature Core 2?	N/A	0.50	1.20	0.60	0.09	0.05	10YR 3/3 Dark Brown	Sandy Clay Loam	70% sandy clay loam; 20% large cobbles; 10% small cobbles/pebbles
								Total Volume Excavated	**0.45**			

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Chapter 6. The Alabama Ceramic Assemblage, Construction Materials, and Clay Survey (Operation 8)

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Ceramic Assemblage

The Alabama ceramic assemblage presents a unique opportunity to evaluate an assemblage with respect to both the traditional type:variety classification system used widely in the Maya lowlands, as well as a detailed analysis of paste characteristics based on macroscopic and microscopic assessment in the field and subsequent thin section petrography. This chapter section focuses on in-field analyses conducted in the SCRAP field laboratory facility in Maya Centre during the 2019 field season. It builds on preliminary analyses in 2018, in which ceramics recovered from settlement sites ALA-047B and ALA-043 of Block C1 were grouped primarily according to paste characteristics and, when possible, stylistic and formal characteristics. The previous petrographic analysis (Howie 2018) and macroscopic observations (Howie and Jordan 2018) indicate that the ceramic assemblage includes locally produced pottery and non-local pottery from many locations, including Lamanai/Northern Belize, coastal regions, the Belize River Valley, Southern Belize, and the Maya Mountains (Bladen Volcanic Member, Hummingbird Batholith, Santa Rosa Group). Analysis of the Alabama assemblage is complicated by the highly eroded and fragmented nature of the ceramics that render it difficult, if not impossible, to evaluate chronology and provenance for all contexts. In many cases, the only sherds recovered are small body pieces with no surface treatment.

The goals of the 2019 season were to (1) identify and characterize different paste wares representing local and non-local pottery, and (2) analyze all sherds (diagnostic and body) from surface collections and existing type collection to assign them to a paste ware group or previously defined ceramic type. Paste ware descriptions build on previous analysis of ceramics recovered from settlement excavations (Howie and Jordan 2018; Koster and Peuramaki-Brown 2016 [Operation 4]; Morton et al. 2016 [Operation 2]; Pennanen and Peuramaki-Brown 2016 [Operation 3]) and incorporate data on ceramics from surface collection across the Alabama settlement zone ([Operation 1] Peuramaki-Brown et al. 2014, 2015). A summary of the surface collection analysis is included in this report (Table 6.4, 6.5). Ceramics exported for thin section petrography were sampled from surface collection (examined in 2019) and excavations (examined in 2018).

Ceramics were assigned to a paste ware group based on macroscopic and microscopic (using a Dino-Lite USB microscope) analysis of body sherds and diagnostic rim sherds. The paste wares described below (except for Paste Wares 2, 3, and 9) build on the results of Howie's (2018) petrographic analysis to define macroscopic paste categories to facilitate future analyses. The parent sherds were returned to the Maya Centre laboratory, facilitating direct comparison with the previously analyzed sherds. Many of the pastes are composed of sand and crushed rock derived from a granitic parent material, but some of the distinguishing characteristics in thin section (e.g., the presence/absence of particular minerals) were difficult to assess using only a Dino-Lite. The abundance of sandy paste sherds in the Alabama assemblage is unique in the Maya region, where calcium carbonate (e.g., limestone) dominates; however, the varying compositions representing both locally produced and non-local vessels often look very similar.

Samples of the primary paste wares were exported for petrographic analyses; the provenance and descriptive data for each sample is presented in Table 6.1. Samples selected for petrography will work toward further defining the ceramic typology to determine provenance, resource acquisition, and technological variability in locally produced pottery, and to clarify/modify ware and typological designations. Only rims exported for petrography were drawn and included in this report (Figure 6.21). Additional rim profiles will be drawn once the ceramic typology is better defined. All ware groups were described following the format used by Graham (1994) for the Stann Creek Project. The goal is not only to evaluate microscopic characteristics indicative of provenance or technological difference but to create a ceramic typology that can be used by all members of the SCRAP project.

Paste Ware 1

Basis of Division
This ware is characterized by a relatively hard brown paste with distinct and abundant iron (Fe) nodules. The more eroded sherds, which are frequent, are more friable and have a gritty feel. When viewed microscopically with a Dino-Lite, the paste contains abundant laths of biotite. A sherd from this group (SCP 3) was analyzed petrographically by Howie (2018) and was consistent with the local geology. The abundance of Paste Ware 1 in the Alabama assemblage further suggests that this fabric group was locally produced. This group can be identified based on the gritty, brown to reddish-brown micaceous paste, abundant iron nodules, and biotite.

Five additional Paste Ware 1 samples were exported for petrographic analysis in 2019:

- SCRAP-21 (Block D, ALA-040, Op 1 Surface Coll. GPS 075)
- SCRAP-22 (Block B, ALA-086B, Op 1 Surface Coll. GPS 168)
- SCRAP-23 (Block D, ALA-039, Op 1 Surface Coll. GPS 068)
- SCRAP-24 (Block C1, ALA-045A, Op 3, Subop F, Lot "Surface," Cat. #10437-T002)
- SCRAP-26 (Block 1, Scatter 024, Op 1 Surface Coll. GPS 235).

Dating
Late to Terminal Classic, possibly Early Classic.

Paste and Firing
The paste is a brown (7.5YR 5/4; 7.5YR 5/6; 10YR 6/4) to reddish brown (5YR 5/4; 5YR 5/6), sometimes with a grey to black core. The core varies from a thin strip in the middle of the fabric to a thick horizon that occupies most of the fabric in cross-section. Fire clouding is present but rare. The paste contains abundant, rounded, circular to ovoid iron (Fe) nodules. The fabric is moderately sorted and inclusions (primarily quartz with some potassium feldspar [K spar]) are subrounded to angular. The biotite appears as black, elongated, lath-like inclusions. The size distribution is unimodal with occasional larger inclusions interspersed throughout (Figure 6.1).

Forms and Dimensions
The majority of the sherds are body sherds, but the few rim sherds indicate that this ceramic type consists of both jars (evidenced by neck fragments) and incurving bowls. Many of the rim forms do not contain enough of the remaining body so it is difficult to determine if they belong to jars or bowls. Body thickness is variable and ranges from thin (5.4mm) to medium (9.7mm) thickness. Ring bases are also present.

Surface Finish and Decoration
When present, the slip is red (2.5YR 4/6; 2.5YR 5/6). The smoothed surface on all sherds, regardless of form, suggests that they were all slipped but the slip is no longer present. One thin body sherd contains fingernail impressions (Figure 6.2).

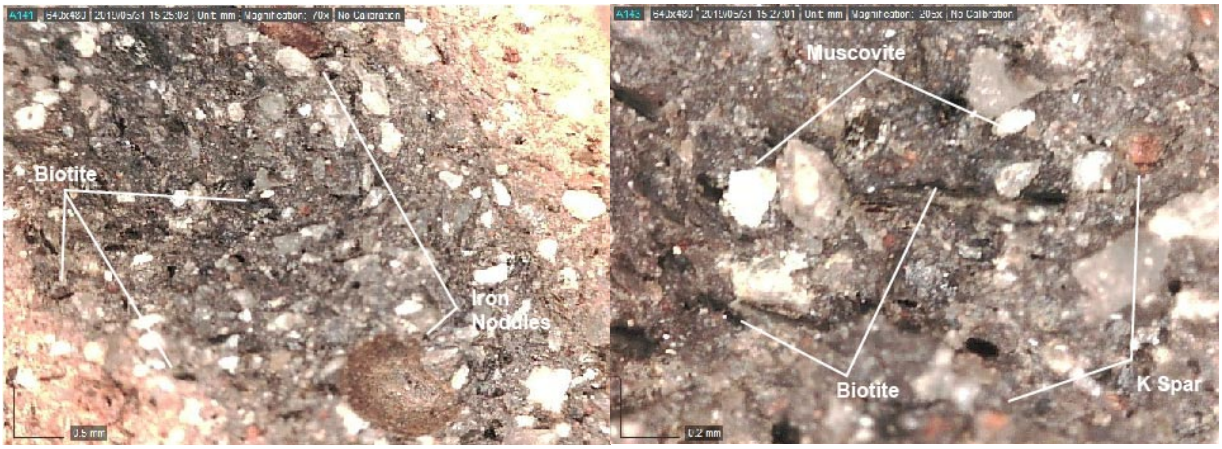

Figure 6.1: Paste Ware 1 at 70x magnification (left, 0.5mm scale) and 205x magnification (right, 0.2mm scale).

Figure 6.2: Paste Ware 1, assortment of sherds from various contexts (left) and SCRAP-24/Cat. #10437-T002 (right).

<u>Paste Ware 2, Groups 1 and 2</u>

Basis of Division
This ware is characterized by a brown to reddish-brown, sandy, micaceous paste with a red slip. This paste ware is abundant and appears to be the predominant fabric for moderately coarse textured, red-slipped vessels at Alabama (compare to Ware 1). This paste ware is tentatively divided into two groups, pending petrographic analysis: one with angular rock temper (Group 1) and one with sand temper (Group 2). Two additional groups are described separately below. The paste for Group 3 is much coarser and contains more unslipped vessels. The paste for Group 4 contains abundant, elongated brown minerals (possibly biotite) potentially indicative of a provenance distinction.

Paste Ware 2 was not included in previous petrographic analysis. Five samples were exported for petrographic analysis in 2019:

Ware 2 (Unknown Group)

- SCRAP-25 (Block E, Scatter 032, Op 1 Surface Coll. GPS 252, Cat. #10361-T009).
- SCRAP-32 (Block C1, ALA-047C, Op 1 Surface Coll. GPS 136).
- SCRAP-35 (Block C1, ALA-045A, Op 3, Subop C/E, Lot 1, Cat. #10385-T026): possibly a fine paste variant. It was originally categorized as a possible Southern Belize (Toledo District) sherd because of its fine, sandy paste.

Ware 2 (Group 1)

- SCRAP-30 (Block C1, ALA-047B, Op 2, Subop B, Lot 1).

Ware 2 (Group 2)

- SCRAP-28 (Block C1, ALA-047B, Op 2, Subop B, Lot 2).

Dating

Late to Terminal Classic, possibly Postclassic (similar to the undefined ware sampled for petrography).

Paste and Firing

The paste is a brown (7.5YR 4/4; 7.5YR 5/4) to reddish-brown (2.5YR 4/6; 2.5YR 5/6) colour, sometimes with a grey to black core. The reddish-brown colour is much more common. The core varies from a thin strip in the middle of the fabric to a thick horizon that occupies the majority of the fabric in cross-section. Some are half black, with the black colour primarily on the interior of the vessels. Many of the sherds exhibit evidence of fire clouding. The fabric would be considered coarse in other regions of the Maya lowlands but is moderately coarse in the Alabama ceramic assemblage. The clay is micaceous (primarily muscovite with some biotite) and sandy. The sand is composed primarily of quartz and a pinkish mineral that is possibly potassium feldspar due to its distinctive light pink colour. Microcline, a type of potassium feldspar, is common in some of the natural clay samples analyzed petrographically by Howie (2018). The pinkish inclusions could also be iron rich quartz or some other mineral. Some of the rounded to subrounded sand is composed of rock (possibly granite [rocks with different compositions denoted by colour differences, e.g., clear to grey quartz + dark biotite] and quartzite [rocks composed of multiple clear to grey quartz grains]). Some of the sherds also contain dark-red, rounded inclusions of unknown composition (they are possibly iron-coated quartz grains or a completely different rock/mineral). The paste (both colour and composition) is variable across the group but there are two distinct paste subgroups: one appears to be tempered with crushed rock and the other is tempered with rounded to subrounded sand. The temper designation is based on the fact that the inclusions are bimodally distributed.

Group 1: The fabric tempered with rock is more abundant in the sample. The rock temper fabric is moderately to poorly sorted with large, unevenly distributed, subangular to angular inclusions of rock (granite and possibly quartzite). The naturally occurring sand in the clay is rounded to subrounded (Figures 6.3 and 6.4).

Group 2: The sand tempered fabric is moderately to poorly sorted with large, unevenly distributed, rounded to subrounded inclusions composed primarily of quartz and occasionally granitic sand and other rocks and minerals (possibly K-spar). The naturally occurring sand in the clay is rounded to subrounded.

Forms and Dimensions

Nearly all of the sherds in this group are body sherds. One rim sherd is an incurving bowl with a direct rim and beveled-in lip. All of the sherds are slipped on both the interior and exterior, suggesting that this group is composed of serving wares (bowls/dishes). Body thickness is variable and ranges from thin (6.4mm) to medium (8.55mm) thickness (Figure 6.5).

Surface Finish and Decoration

A red slip (2.5YR 5/4; 2.5YR 5/6) is present on both the exterior and interior of all the sherds. When a slip is not present, due to post-depositional processes or burning, the surface is smooth, suggesting that it had a slip. One body sherd has fingernail impressions above a faint incised line.

Figure 6.3: Paste Ware 2, Group 1 at 50x magnification (left, 0.5mm scale) and Group 2 at 50x magnification (right, 0.5mm scale).

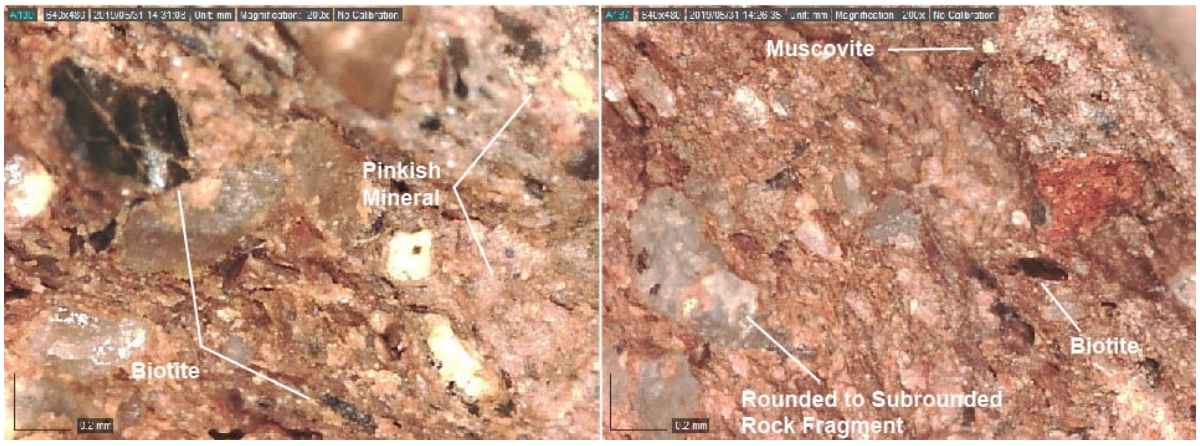

Figure 6.4: Paste Ware 2, Group 1 at 200x magnification (left, 0.2mm scale), and Group 2 at 200x magnification (right, 0.2mm scale).

Figure 6.5: Paste Ware 2, Group 1 (top row) and Group 2 (bottom row).

Paste Ware 2, Group 3

Basis of Division
This ware group can be characterized as a very coarse paste, often thick-bodied, with slightly smoothed surfaces and what appears to be a wash or eroded slip (or a mixture of both within the group) applied to both the interior and exterior surfaces. This group is similar to Group 2 but with a coarser textured paste. This paste ware group contains more unslipped and coarse vessels and was described separately.

As mentioned above, Paste Ware 2 was not included in previous petrographic analysis. One sample of Group 3 was exported for petrographic analysis in 2019:

- SCRAP-29 (Block C1, ALA-047B, Op 2, Subop B, Lot 2).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is brown (7.5YR 4/4; 7.5YR 5/4) to reddish-brown (2.5YR 4/6; 2.5YR 5/6; 5YR 5/4) in colour, sometimes with a grey to black core. The reddish-brown colour is much more common. This fabric group does not have a core but the interior portion of the paste, ranging from a thin strip to most of the cross-section, is often a grey to black colour. There is some evidence of fire clouding. The clay is micaceous (primarily muscovite with some biotite) and sandy. The rounded to subrounded sand consists primarily of quartz and a pinkish mineral that is possibly potassium feldspar due to its distinctive light pink colour. Microcline, a type of potassium feldspar, is common in some of the natural clay samples analyzed petrographically by Howie (2018). The pinkish inclusions could also be iron-rich quartz or some other mineral. Some of the rounded to subrounded inclusions are composed of rock. The fabric appears to be tempered based on the uneven and bimodal distribution of larger inclusions. The larger inclusions are often subangular to angular and have a variable composition including quartz and rock fragments (possibly granite [rocks with different compositions denoted by colour differences, e.g., clear to grey quartz + dark biotite] and quartzite [rocks composed of multiple clear to grey quartz grains]). Some of

the sherds also contain dark-red, rounded inclusions of unknown composition (possibly iron-coated quartz grains or a completely different rock/mineral). The fabric is very poorly sorted (Figure 6.6).

Forms and Dimensions

Most of the sherds are thick, ranging from 6.9mm to 14mm. The body sherds appear to have a wash or slip on interior surfaces, suggesting that this group is composed of large, open bowls or jars. A rim sherd with an outflaring everted rim, exterior folded rim, and square lip but without much of a body—making it difficult to assess form—is either for a large bowl or jar. Another rim with an outflared everted rim and rounded lip is also a large bowl or jar. Jars with outcurved rims and rounded lips.

Surface Finish and Decoration

The surface of this ceramic group is smoothed but in many cases inclusions (particularly muscovite and quartz) are clearly visible on the surface (Figure 6.7). Most appear to have a wash that is a similar colour to the clay, but some samples have a thin, red slip (2.5YR 4/4).

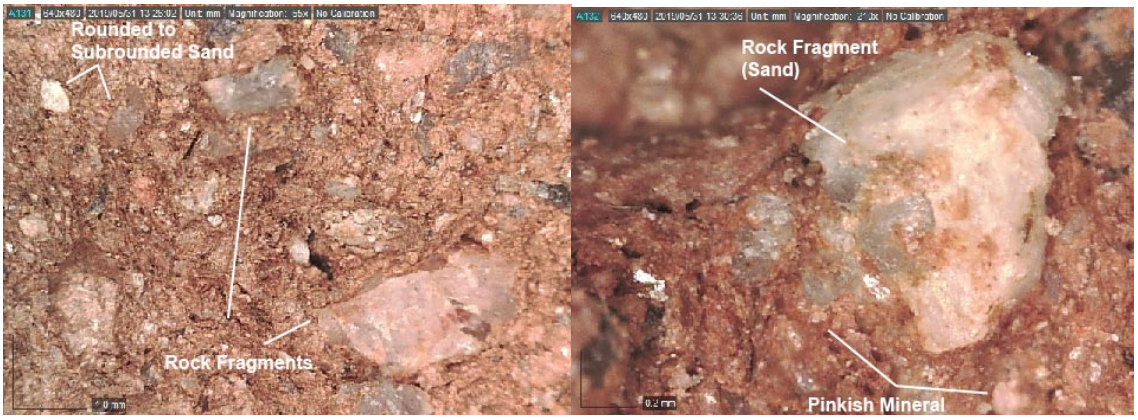

Figure 6.6: Paste Ware 2, Group 3 at 55x magnification (left, 1mm scale) and 210x magnification (right, 0.2mm scale).

Figure 6.7: Paste Ware 2, Group 3.

Paste Ware 2, Group 4

Basis of Division
This ware group is very similar to Group 2 with the addition of rounded and elongated reddish-brown inclusions of unknown composition.

As mentioned above, Paste Ware 2 was not included in previous petrographic analysis. One sample of Group 4 was exported for petrographic analysis in 2019:

- SCRAP-48 (Block D, ALA-039, Op 1 Surface Coll. GPS 068).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is a reddish-brown colour (2.5YR 5/6; 2.5YR 4/6), with a medium-coarse texture that is oxidized throughout. The fabric would be considered coarse in other regions of the Maya lowlands but is moderately coarse in the Alabama ceramic assemblage. The clay is micaceous (primarily muscovite with some biotite) and sandy. The sand is composed primarily of quartz and a pinkish mineral that is possibly potassium feldspar due to its distinctive light pink colour. Microcline, a type of potassium feldspar, is common in some of the natural clay samples analyzed petrographically by Howie (2018). The pinkish inclusions could also be iron-rich quartz or some other mineral. This group is very similar to Groups 1 and 2 but includes elongated and rounded, reddish-brown inclusions of unknown composition. It is moderately to poorly sorted and includes large, rounded inclusions that are likely rock (possibly granite or quartzite) (Figure 6.8).

Forms and Dimensions
All body sherds appear to be slipped on both the exterior and interior, suggesting an open serving ware form.

Surface Finish and Decoration
Red slip (10R 5/4) on exterior surface. The interior surfaces are either smoothed and unslipped or have a thin wash.

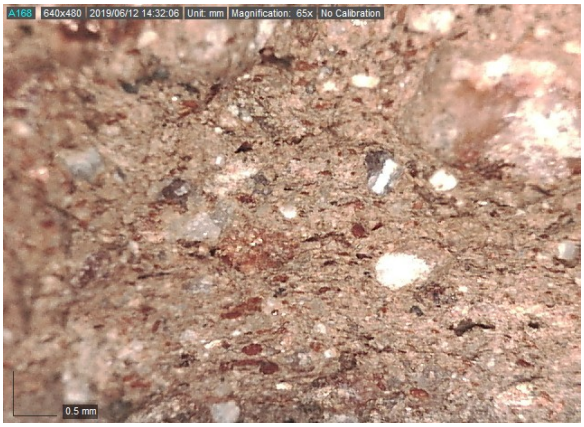

Figure 6.8: Paste Ware 2, Group 4 at 65x magnification (0.5mm scale). Note the elongated and rounded reddish-brown inclusions.

Paste Ware 3

Basis of Division
Coarse, red paste often with a blackened interior. There is a red slip on the exterior of the better-preserved sherds. When poorly preserved, which is most often the case, the exterior surface is rough, and inclusions are visible on the surface. Many show evidence of burning on interior surfaces. This paste ware was defined based on samples from ALA-047B (Block C1), but it is not abundant across the site. It is possible that this ware is just a variation of Paste Ware 2. No samples of Paste Ware 3 were exported for petrography because this ware is only represented by body sherds.

Dating
Late to Terminal Classic (?)

Paste and Firing
The fabric is red (10YR 5/8; 10YR 4/8; 2.5YR 5/8) to reddish brown with a black core or completely black interior surface that extends into the fabric. Occasional tan colour (10YR 7/4) on the interior with the distinctive, red exterior colour. The clay is micaceous and sandy. The naturally occurring inclusions are rounded to subangular and appear to be primarily composed of quartz. The fabric is moderately to poorly sorted with larger, subrounded to angular inclusions (primarily quartz). These larger inclusions suggest that the fabric was tempered with sand and/or crushed rock but could also be a poorly sorted natural clay. This ware undoubtedly subsumes variation (both provenance and technological), but it is difficult to subdivide this group macroscopically.

Forms and Dimensions
The ware is represented by body sherds. One is likely a neck to a jar or open bowl. All of the sherds are slipped on the exterior and most show evidence of slip, either in colour or a smoothed burned surface, on the interior surface, suggesting the form was an open bowl or jar. Body sherds range in thickness from 5.8mm to 8.75mm (Figure 6.9).

Surface Finish and Decoration
Red (10YR 5/8) to reddish-brown (2.5YR 4/4) slip on all exterior surfaces and most interior surfaces. The slip is generally very poorly preserved, although in places it is thick enough to completely cover the inclusions, suggesting that these sherds were not coated in a thin wash.

Figure 6.9: Paste Ware 3

Paste Ware 4

Basis of Division
This ware was defined on the basis of only a few sherds and comparison to a well-preserved sample (SCP 5) that was petrographically analyzed by Howie (2018). There are sherds that appear to be similar but are much more friable, and it is unclear if these sherds are technologically similar based on in-field analysis. To complicate matters, this ware group is macroscopically similar to Paste Ware 8 (SCP 6), but they were likely produced in different locations based on petrographic data. Both wares are sandy, yellowish-brown, relatively hard pastes. Howie (2018) suggested that SCP 5 may have been produced near the Hummingbird Batholith based on its alkali igneous rock parentage, abundance of muscovite mica, and rarity of biotite mica, while SCP 6 is consistent with local production. It is difficult to make these mineralogical distinctions using only a Dino-Lite. Samples assigned to Paste Ware 4 have a pink to light reddish-brown slip, although it is unclear at this time if this distinction is due to taphonomy. A more detailed description will be included in future reports when this paste ware can be more confidently defined macroscopically.

Four samples were exported for petrographic analysis in 2019:
- SCRAP-44 (Block 2, ALA-126, Op 1 Surface Coll. GPS 272).
- SCRAP-45 (Block C1, ALA-081, Op 1 Surface Coll. GPS 137, Cat. #10361-T001).
- SCRAP-46 (Block C1, ALA-047B, Op 2, Subop B, Lot 14).
- SCRAP-47 (Block C1, ALA-047B, Op 2, Subop B, Lot 3).

Dating
Late to Terminal Classic

Paste and Firing
This ware consists of a hard, light yellowish-brown (10YR 6/4) to yellowish-brown (10YR 5/4) sandy and micaceous paste. Dark cores are rare but when present they are grey (10YR 5/1) to black. The fabric is poorly sorted and inclusions (primarily quartz and rock [granite]) are rounded to subrounded. The distribution is unimodal with a few larger inclusions, so it is unclear if this fabric was tempered or was produced using a naturally sandy clay. Howie's (2018) analysis indicated that this fabric group was not tempered (Figure 6.10).

Forms and Dimensions
Jars.

Surface Finish and Decoration
Smoothed surface with a pink (5YR 7/3) to light reddish-brown (5YR 6/4) slip. The slip is often eroded, revealing the light brown paste beneath. When present, the slip is often cracked (Figure 6.11).

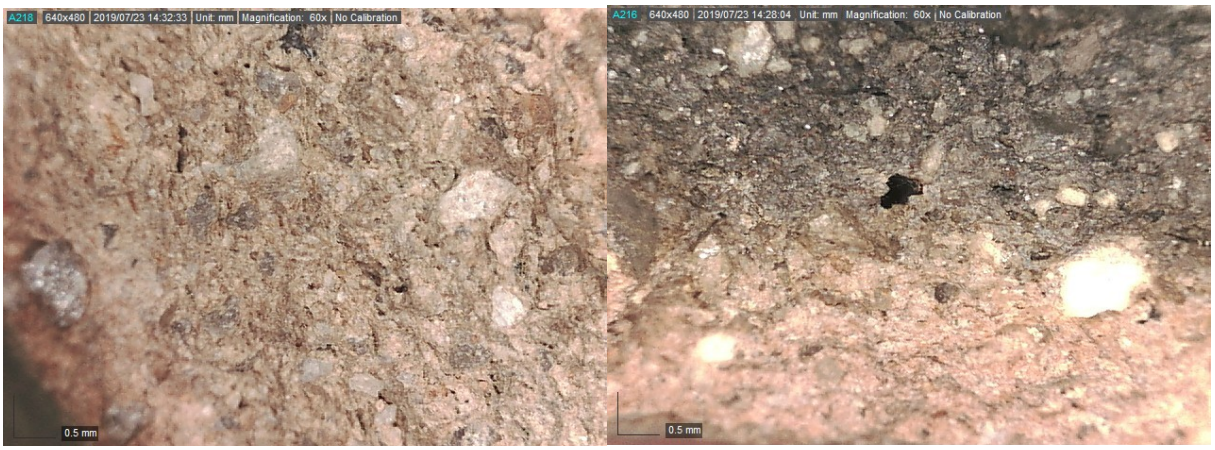

Figure 6.10: Paste Ware 4, SCRAP-47 at 60x magnification (left, 0.5mm scale) and SCRAP-45/Cat. #10361-T001 at 60x magnification (right, 0.5mm scale).

Figure 6.11: Paste Ware 4, Cat. #10361-C005 (left, analyzed by Howie, SCP 5) and Cat. #10361-T001(exported in 2019).

Paste Ware 5

Basis of Division

This ware has a hard, brown, sandy, and micaceous (muscovite and biotite) paste. Surfaces are smoothed and are either unslipped or have a pink to red wash. Larger inclusions in the paste are clearly visible on the surface, particularly for more poorly preserved sherds. This fabric was difficult to identify macroscopically because it is a sandy, micaceous fabric, particularly when the sherds have a thick, black core. A sherd from this group (SCP 1)was analyzed petrographically by Howie (2018). This ware group is macroscopically similar to Paste Ware 6 (SCP 7), but they were likely produced in different locations based on petrographic data. Howie (2018) suggested that SCP 7 may have been produced near the Bladen Volcanic Member based on the presence of devitrified volcanic rock, while SCP 1 is consistent with the local geology

Two samples were exported for petrographic analysis in 2019:

- SCRAP-31 (Block D, ALA-048, Op 1 Surface Coll. GPS 119, Cat. #10361-T018).
- SCRAP-33 (Block C1, ALA-082, Op 1 Surface Coll. GPS 142).

Dating
Late to Terminal Classic, possibly Early Postclassic (bowls with filleting).

Paste and Firing
Pale brown (10YR 6/3), to light brown (7.5YR 6/4), to very pale brown (10YR 7/3), to dark grayish brown (10YR 4/2). The paste is poorly sorted, and inclusions are subrounded to subangular. The size distribution is bimodal. Quartz and granite rock inclusions are larger and angular with rounded granitic sand (quartz most visible with some potassium feldspar and polycrystalline quartz and/or quartzite). Muscovite and biotite are clearly visible with the Dino-Lite. Some of the samples appear to have been tempered with sand. There is a bimodal size distribution but, instead of larger angular rock fragments, the larger inclusions are composed of subrounded inclusions, primarily quartz. It is possible that these sand-tempered sherds were misidentified as Paste Ware 5 (instead of Paste Ware 6, which is sand tempered). This could be the important difference to distinguish the two paste wares using a Dino-Lite even though they are very similar macroscopically (Figure 6.12).

Forms and Dimensions
Bowls with filleting and jars (Figure 6.13). The jars are primarily represented by necks.

Surface Finish and Decoration
Smoothed but unslipped. Some samples appear to have a very eroded, pink (5YR 7/3) to light reddish-brown (5YR 6/3) wash applied to exterior surfaces.

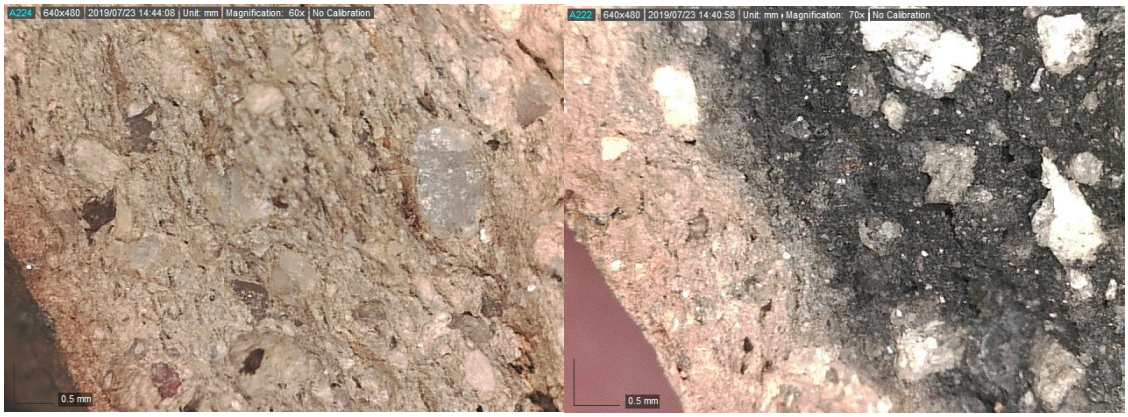

Figure 6.12: Paste Ware 5, SCRAP-31/Cat. #10361-T018 at 60x magnification (left, 0.5mm scale) and SCRAP-33 at 60x magnification (right, 0.5mm scale).

Figure 6.13: Paste Ware 5, SCRAP-31/Cat. #10361-T018.

Paste Ware 6

Basis of Division
This ware has a hard, brown, sandy, and micaceous (muscovite and biotite) paste. The surfaces are smoothed and are either unslipped or have a pink to red wash. Larger inclusions are clearly visible on the surface. A sherd from this ware (SCP 7) was analyzed petrographically by Howie (2018). It is very difficult to identify macroscopically and is particularly difficult to distinguish from Paste Ware 5, which also has a sandy, micaceous fabric.

One sample was exported for petrographic analysis in 2019:

- SCRAP-43 (Block 2, ALA-119, Op 1 Surface Coll. GPS 254).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is greyish brown (10YR 5/2) to yellowish brown (10YR 5/4), hard, micaceous, and sandy. It is poorly sorted and has a bimodal size distribution. The fabric appears to be tempered with granitic sand. The larger inclusions are rounded to subrounded and composed of granitic sand (quartz and rock fragments are most clearly identifiable). The smaller inclusions are also rounded to subrounded granitic sand with abundant biotite and some muscovite (Figure 6.14).

Forms and Dimensions
Bowls and Jars.

Surface Finish and Decoration
Smoothed but unslipped. Some samples appear to have a very eroded, pink (5YR 7/3) to light reddish-brown (5YR 6/3) wash applied to exterior surfaces.

Figure 6.14: Paste Ware 6, SCRAP-43 at 60x magnification (left), and Cat. #10361-C007 (SCP 7) analyzed by Howie (right).

Paste Ware 7

Basis of Division
This is a distinctive, fine, light-brown paste with very smooth surface. It is rare at Alabama. A sherd from this group (SCP 4) was analyzed petrographically by Howie (2018). This group is tempered with grog, which was clear in petrographic analysis but difficult to identify in the field.

One sample was exported for petrographic analysis in 2019:

- SCRAP-42 (Block C1, ALA-084, Op 1 Surface Coll. GPS 145).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is pale brown (10YR 6/3) with a dark-gray (10YR 4/1) core. The paste is well sorted, and the distribution is bimodal with large brown and black inclusions. Petrographic analysis revealed these inclusions to be grog. The fine inclusions visible with the Dino-Lite include quartz and muscovite. Petrographic analysis indicate that this fabric once contained carbonate, but the voids are not clearly visible with the Dino-Lite (Figure 6.15).

Forms and Dimensions
Jars

Surface Finish and Decoration
The surface is very smooth. The vessels could have been slipped but none remains.

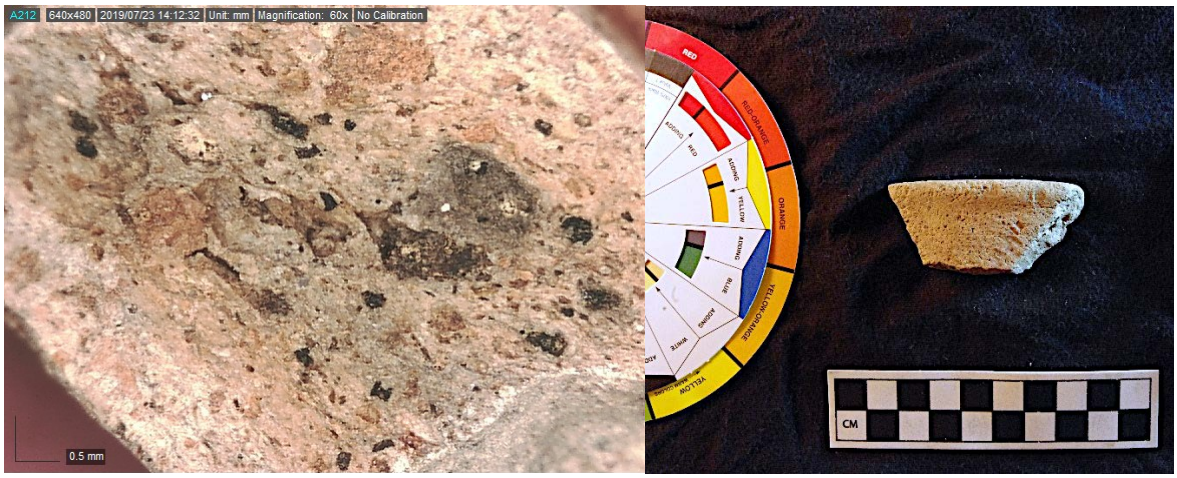

Figure 6.15: Paste Ware 7, SCRAP-42 at 60x magnification (left, 0.5mm scale) and Cat. #10361-C004 (SCP 4) analyzed by Howie (right).

Paste Ware 8

Basis of Division
This is sandy and micaceous ware. Vessels are primarily thin walled. This ware was difficult to identify in the field because it is very similar to Paste Ware 4. Vessels assigned to Paste Ware 8 (versus Paste Ware 4) are generally thinner-walled vessels, but it is unclear if this is accurate or not. A sherd from this group (SCP 6) was analyzed petrographically by Howie (2018).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is light brown (7.5YR 6/3), hard, sandy, and micaceous fabric. The fabric is moderately to poorly sorted with a bimodal size distribution. It appears to be tempered with granitic sand using macroscopic observations. Petrographic descriptions indicate that this fabric is tempered with crushed rock. The angularity of the crushed rock temper is not as easy to distinguish using a Dino-Lite and it may have been tempered with both crushed rock and granitic sand. The larger inclusions that can be identified with the Dino-Lite include quartz and granite rock fragments. The naturally occurring sand consists of rounded quartz inclusions and muscovite. No photo currently available.

Forms and Dimensions
Thin-walled jars with uneven interior surfaces.

Surface Finish and Decoration
Unslipped and relatively rough surfaces compared to other sandy fabrics.

Paste Ware 9

Basis of Division
This paste ware is distinguished by its white to light-grey to pink colour with densely packed, abundant, rounded to subrounded sand inclusions.

Four samples were exported for petrographic analysis in 2019:

- SCRAP-38 (Block D, ALA-063, Op 1 Surface Coll. GPS 101).
- SCRAP-39 (Block C2, ALA-009A, Op 1 Surface Coll. GPS 036, Cat. #10361-T011).
- SCRAP-40 (Block C1, ALA-084, Op 1 Surface Coll. GPS 145).
- SCRAP-41 (Block D, ALA-065, Op 1 Surface Coll. GPS 111).

Dating
Late to Terminal Classic.

Paste and Firing
The paste ranges in colour from white, to light grey (2.5YR 7/2), to pink (2.5YR 6/4; 2.5YR 7/4). The fabric is well sorted with rounded to subrounded inclusions of equant to elongated sand. The size distribution is unimodal. The fabric is so densely packed that it appears to contain more rock and mineral inclusions than clay. The unimodal size distribution suggests that this fabric was not tempered but, rather, was a well-sorted sandy clay. The most abundant inclusion

in most of the pottery is quartz; however, the composition is not the same across the group and they occasionally contain feldspar, mafic minerals, and/or granitic rock (Figure 6.16).

Forms and Dimensions
Jars and bowls (Figure 6.17).

Surface Finish and Decoration
Most of the sherds assigned to this group are unslipped; however, some have a pink wash (2.5YR 7/4).

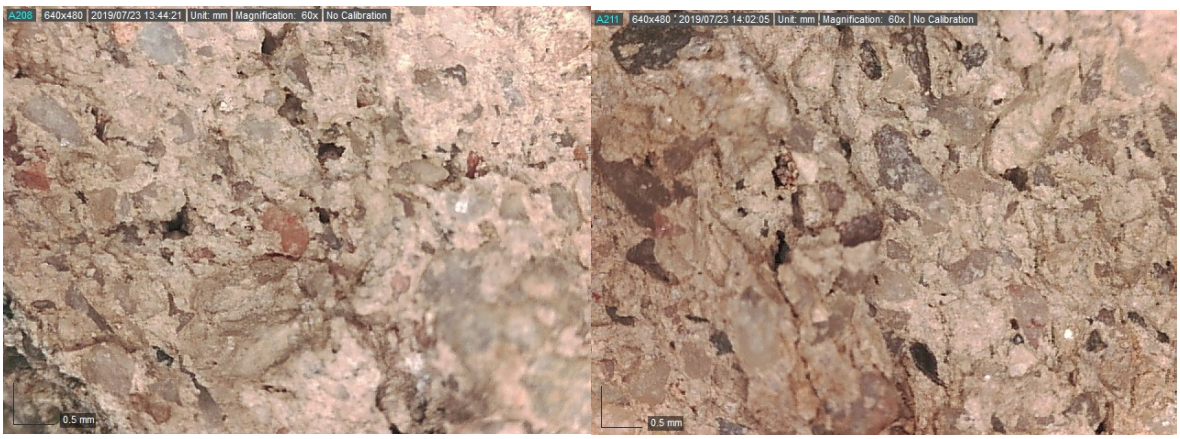

Figure 6.16: Paste Ware 9, SCRAP-38 at 50x magnification (left, 0.5mm scale), and SCRAP-40 at 60x magnification (left, 0.5mm scale). Note the different composition of the inclusions.

Figure 6.17: Paste Ware 9, SCRAP-39/Cat. #10361-T011.

Paste Ware 10

Basis of Division
Thick-walled, tan fabric with thick black core that occupies most of the fabric in cross-section, primarily quartz inclusions. This fabric is rare at Alabama but is of interest because the vessels have a similar form to unslipped jars of the Cayo Unslipped ceramic group from the Belize River Valley, but the inclusions are not composed of calcium carbonate.

Two samples were exported for petrographic analysis in 2019:
- SCRAP-36 (Block C1, ALA-047B, Op 2, Subop B, Lot 2B-11).
- SCRAP-37 (Block C1, ALA-047A, Op 2, Subop G, Lot 4, Cat. #10385-T020).

Dating
Late to Terminal Classic.

Paste and Firing
The paste colour is very pale brown (10YR 7/3) with a thick black core. The fabric is moderately sorted, and inclusions are rounded to subrounded, and equant to elongated. The size distribution is bimodal. The paste appears to be a sandy clay tempered with sand. The inclusions are primarily quartz with some potassium feldspar inclusions (Figure 6.18).

Forms and Dimensions
This fabric group is relatively rare. The forms identified thus far are large jars with outflared rims reminiscent of the Cayo Group in the Belize Valley (Figure 6.19).

Surface Finish and Decoration
Unslipped.

Figure 6.18: Paste Ware 10, SCRAP-36 at 50x magnification (left, 1.0mm scale), and SCRAP-37/Cat. #10385-T020 at 70x magnification (right, 0.5mm scale).

Figure 6.19: Paste Ware 10, SCRAP-37/Cat. #10385-T020.

Undefined Paste Ware

This ware group was first noted in analysis of Op 1 surface collection materials during the 2019 field season. It was originally assumed to be a very poorly sorted paste variant of Paste Ware 2. The paste is similar to Paste Ware 2 but is much coarser and contains abundant iron nodules. The similarity to Paste 2 suggests a local provenance (Figure 6.20). The vessels were crudely fashioned and often have uneven rims and unsmoothed surfaces in both serving vessel and jar forms. Preliminary ceramic analysis at the end of the season indicated that this paste ware was abundant in sherds from above the terminal occupation levels at mound ALA-002B in Block C2 (2019 excavations, see Chapter 3 of this volume), separated from the terminal surface by a layer of soil.

Two samples were exported for petrographic analysis in 2019, in case this paste ware represents a temporal marker for Alabama (e.g., Postclassic or at least post-abandonment):

- SCRAP-27 (Block E, Scatter 031, Op 1 Surface Coll. GPS 251).
- SCRAP-34 (Block E, Scatter 031, Op 1 Surface Coll. GPS 251).

Figure 6.20: Undefined Ware, SCRAP-27 at 70x magnification (left, 0.5mm scale), and SCRAP-34 at 70x magnification (right, 0.5mm scale).

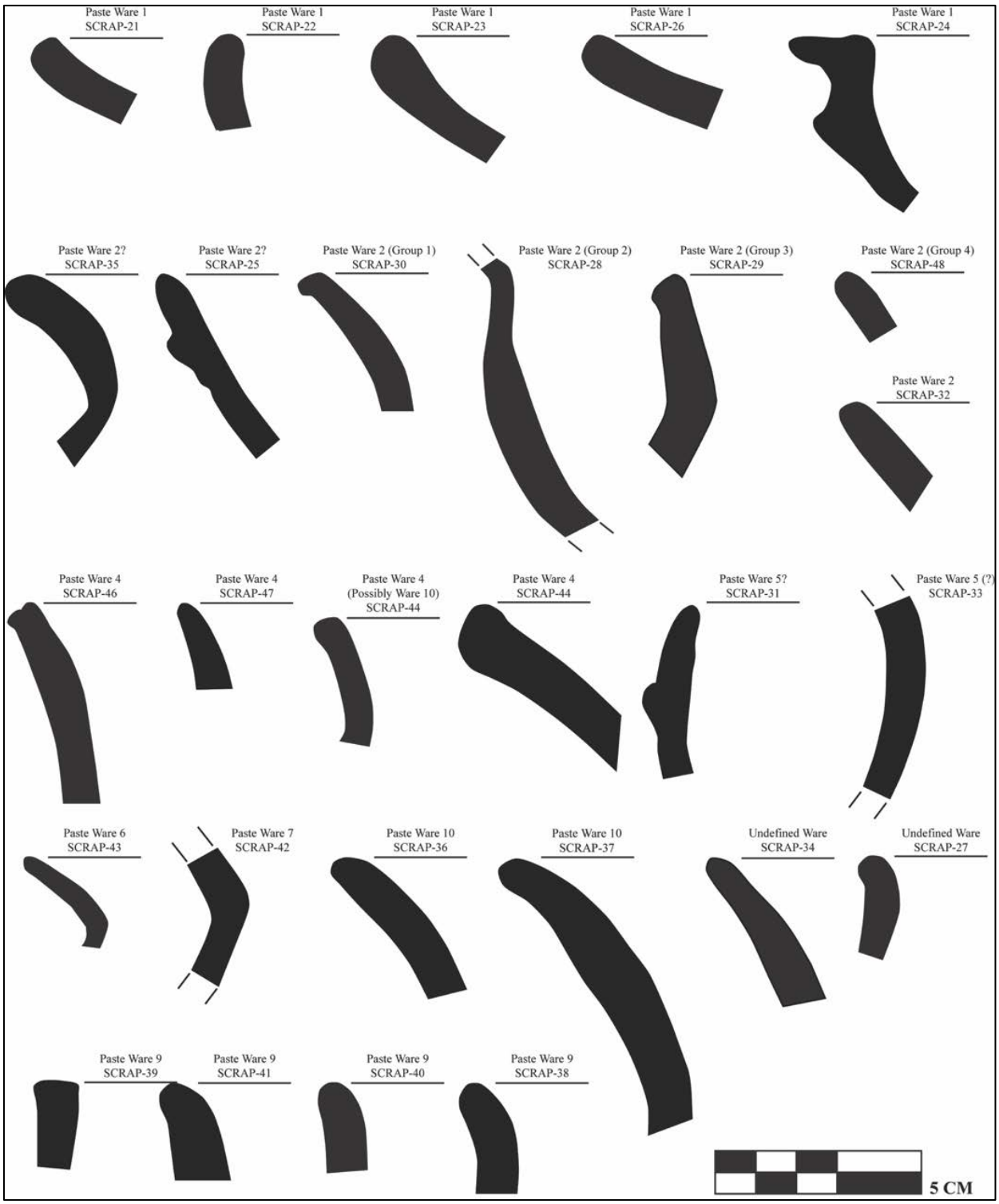

Figure 6.21: Rim profiles of exported pottery.

Table 6.1: Context and descriptive data for exported pottery samples subject to petrographic analysis.

Sample #	Paste Ware	Context	Paste Color	Paste Munsell	Core Color	Core Munsell	Slip Color	Slip Munsell	Form	Hypothesized Provenance
SCRAP-21	1	Block D, ALA-040, Op 1 GPS 075	Brown	7.5YR 5/4	Black	7.5YR 2/1			Bowl/Dish	Local
SCRAP-22	1	Block B, ALA-086B, Op 1 GPS 168	Brown	7.5YR 5/4	Grey	7.5YR 3/1			Bowl/Dish	Local
SCRAP-23	1	Block D, ALA-039, Op 1 GPS 068	Yellowish Brown	10YR 5/4	Very Dark Grey	10YR 3/1			Bowl/Dish	Local
SCRAP-24	1	Block C1, ALA-045A, Lot 3F-surface (Cat. #10437-T002)	Yellowish Red	5YR 5/6	Grey	5YR 4/1			Bowl	Local
SCRAP-25	2?	Block E, S032, Op 1 GPS 252 (Cat. #10361-T009)	Dark Reddish Brown	5YR 3/3	Black	7.5YR 2/1			Bowl	Local
SCRAP-26	1	Block 1, S024, Op 1 GPS 235	Reddish Brown	5YR 5/3	Dark Grey	5YR 4/1			Bowl/Dish	Local
SCRAP-27	Undefined	Block E, S031, Op 1 GPS 251	Reddish Brown	5YR 5/4	None				Jar?	Local
SCRAP-28	2 (Gr. 2)	Block C1, ALA-047B, Lot 2B-2	Red	2.5YR 4/6	Black	2.5YR 3/1			Bowl	Local
SCRAP-29	2 (Gr. 3)	Block C1, ALA-047B, Lot 2B-2	Reddish Brown	5YR 5/4	None				Jar	Local
SCRAP-30	2 (Gr. 1)	Block C1, ALA-047B, Lot 2B-1	Light Reddish Brown	5YR 6/4	Black	7.5YR 2/1			Jar?	Local
SCRAP-31	5?	Block D, ALA-048, Op 1 GPS 119 (Cat. #10361-T018)	Very Pale Brown	10YR 7/3	Light Yellowish Brown	2.5YR 6/3			Bowl	Local
SCRAP-32	2?	Block C1, ALA-047C, Op 1 GPS 136	Reddish Brown	5YR 5/4	Grey	5YR 4/1			Bowl/Dish	Local
SCRAP-33	5?	Block C1, ALA-082, Op 1 Surface Coll. GPS 142	Light Brown	7.5YR 6/3	Black	7.5YR 2/1			Jar?	Local

Sample #	Paste Ware	Context	Paste Color	Paste Munsell	Core Color	Core Munsell	Slip Color	Slip Munsell	Form	Hypothesized Provenance
SCRAP-34	Undefined	Block E, S031, Op 1 GPS 251	Yellowish Red	5YR 5/6	None				Bowl?	Local
SCRAP-35	2?	Block C1, ALA-045A, Lot 3C/E-1 (Cat. #10385-T026).	Yellowish Red	5YR 4/6	None				Jar	Local
SCRAP-36	10	Block C1, ALA-047B, Op 2, Subop B, Lot 2B-11	Very Pale Brown	10YR 7/3	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-37	10	Block C1, ALA-047A, Lot 2G-4 (Cat. #10385-T020)	Very Pale Brown	10Y -7/3	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-38	9	Block D, ALA-063, Op 1 GPS 101	Pale Brown	10YR 6/3	None				Jar?	Non-Local
SCRAP-39	9	Block C2, ALA-009A, Op 1 GPS 036 (Cat. #10361-T011)	Very Pale Brown	10YR 7/3	None				Bowl	Non-Local
SCRAP-40	9	Block C1, ALA-084, Op 1 GPS 145	Very Pale Brown	10YR 7/3	None				Jar?	Non-Local
SCRAP-41	9	Block D, ALA-065, Op 1 GPS 111	Pink	5YR 7/3	None				Jar?	Non-Local
SCRAP-42	7	Block C1, ALA-084, Op 1 GPS 145	Light Yellowish Brown	10YR 6/4	None				Jar	Non-Local
SCRAP-43	6	Block 2, ALA-119, Op 1 GPS 254	Brown	7.5YR 5/3	None				Jar	Non-Local
SCRAP-44	4	Block 2, ALA-126, Op 1 GPS 272	Yellowish Brown	10YR 5/4	Black	7.5YR 2/1			Jar	Non-Local

Sample #	Paste Ware	Context	Paste Color	Paste Munsell	Core Color	Core Munsell	Slip Color	Slip Munsell	Form	Hypothesized Provenance
SCRAP-45	4	Block C1, ALA-081, Op 1 GPS 137 (Cat. #10361-T001)	Yellowish Brown	10YR 5/4	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-46	4	Block C1, ALA-047B, Lot 2B-14	Very Pale Brown	10YR 7/4	Light Greyish Brown	2.5Y 6/2	Red	2.5YR 5/6	Jar	Non-Local
SCRAP-47	4	Block C1, ALA-047B, Lot 2B-3	Very Pale Brown	10YR 7/4	Light Greyish Brown	2.5Y 6/2	Red	2.5YR 5/6	Jar?	Non-Local
SCRAP-48	2 (Gr. 4)	Block D, ALA-039, Op 1 GPS 068	Reddish Brown	5YR 4/4	Black	7.5YR 2/1			Bowl?	Local

Hondo Red Ceramic Group

Basis of Division
Distinctive, thin-walled, orange to yellow tan paste with very fine inclusions. When present, the slip is a bright red colour.

Named Parallel(s)
Hondo Red at Lubaantun (Hammond 1975), Nim Li Punit (Fauvelle 2012), and Uxbenká (Jordan 2019). The type was originally defined by Hammond (1975) at Lubaantun based on a sample of 14 sherds. More recent analyses (Irish 2015) confirm the limited quantities of Hondo Red at Lubaantun. This ceramic group similarly represents a small proportion of the total ceramic assemblage at Uxbenká. The Hondo Red ceramic group represents 12% of the ceramic assemblage at Nim Li Punit and it is posited to have been produced there based on abundance compared to other sites in Southern Belize (Fauvelle 2012). Fauvelle (2012) identified three types within the Hondo Red Group that all share similar orange to yellow to tan pastes: Hondo Red, Sunset Red, and Armadillo Red. Hondo Red has not been identified outside of Southern Belize prior to this study. Both Hondo Red and Sunset Red are present at Alabama (Figure 6.22). Together, as part of the Hondo Red Ceramic Group, they account for 13.8% of the non-diagnostic surface collection materials (see Table 6.5). The Sunset Red type is more abundant (10.2%) than the Hondo Red type (3.6%). The Hondo Red group accounts for 7.9% of the diagnostic sherds from surface collection that could be assigned to a ware group or ceramic type.

Dating
Late to Terminal Classic.

Hondo Red Type

Hondo Red has a medium texture (coarser than Sunset Red), a distinct angular break when broken, and a distinct orange paste with a glossy red slip (when present). The surfaces are often pock marked with very small, circular voids.

Paste and Firing
The paste is relatively fine textured (particularly compared to the Sunset Red type), primarily orange (2.5YR 5/8; 5YR 5/8) with no dark core. Occasionally, the orange colour fades to a yellowish tan (7.5YR 7/6), primarily on the exterior surface. The paste is moderately sorted to well sorted and consists of rounded to subrounded sand composed of quartz, carbonate (no longer present but identified based on the rounded voids), and possibly rocks. The inclusions are very small and difficult to identify with a Dino-Lite, but the prevalence of rounded voids suggests that carbonate sand was the primary inclusion. A Hondo Red sample from Uxbenká was analyzed petrographically and is composed primarily of carbonate sand with some quartz, quartzite, and muscovite (Carbonate Sand B Fabric Group; Jordan 2019: 414-415). The size distribution is unimodal, suggesting the use of a sandy clay that was not tempered (Figure 6.23).

Forms and Dimensions
Hondo Red is primarily represented by body sherds that range in thickness from 2.9mm to 5mm. Fauvelle (2012: 52) notes that the thickness can reach 1cm or more at the rim and base. The form for Hondo Red at Nim Li Punit is primarily an outleaning, round-bottom bowl with shoulder

breaks and circular basal stands, with a less common jar with slightly outleaning, straight-sided neck and an everted rim.

Surface Finish and Decoration
When present, the slip is glossy and red (2.5YR 5/6; 2.5YR 4/8). Hondo Red at Alabama rarely has a preserved slip but the smoothed surfaces on both the interior and exterior surfaces suggests that they were slipped.

Sunset Red Type

The Sunset Red type is more abundant at Alabama, at least at this phase of analysis. It has very smooth surfaces, rounded edges, and often feels ashy although it is unclear if they contain volcanic ash (the complete lack of carbonate can create a similar feel in fine paste pottery). The surfaces are often pock marked with very small, circular voids.

Paste and Firing
The paste is orange (2.5YR 5/8; 2.5YR 6/8) to pale brown (10YR 7/4) to yellow (10YR 7/6; 10YR 6/6), often co-occurring on the same vessel, likely due to firing. Many of the interior surfaces are grey (10YR 5/2) to black. The paste is well sorted and consists of rounded to subrounded sand likely composed of quartz, carbonate, and possibly rock fragments. In general, the inclusions are smaller, and the paste is better sorted than the Hondo Red type. The inclusions are very small and difficult to identify with a Dino-Lite, but the prevalence of rounded voids suggests that carbonate sand was the primary inclusion. The size distribution is bimodal, suggesting Sunset Red was produced using a sandy clay that was not tempered.

Forms and Dimensions
Thin-walled bowls and jars.

Surface Finish and Decoration
Both the interior and exterior surfaces are very smooth, suggesting they were both slipped but the slip is rarely preserved. When present, the slip is glossy and red (2.5YR 5/6; 2.5YR 4/8; 10YR 4/6) like Hondo Red. A body sherd is incised with geometric lines. The incision appears to be a post-slip incision, but it is difficult to be sure because of poor preservation.

Figure 6.22: Hondo Red (left) and Sunset Red (right).

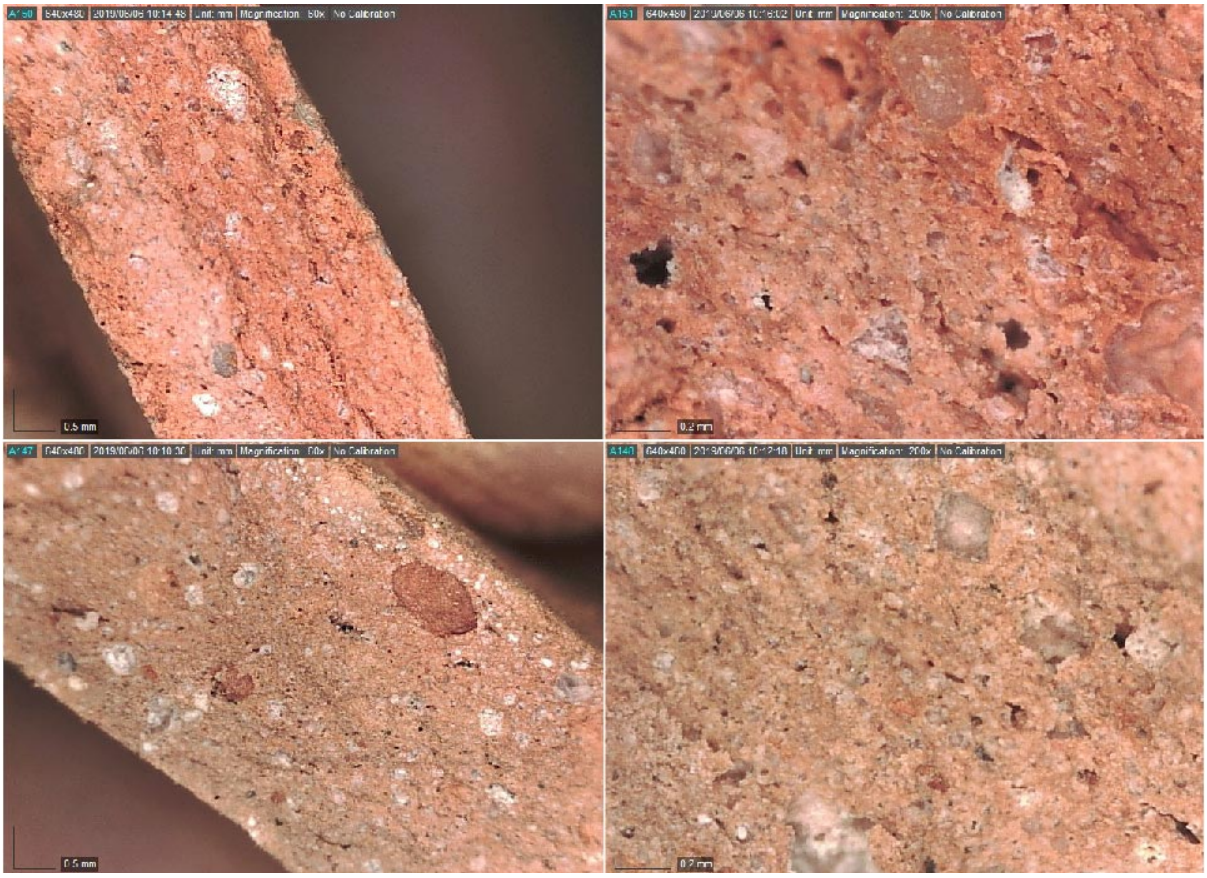

Figure 6.23: Hondo Red at 60x magnification (upper left, 0.5mm scale), Hondo Red at 200x magnification (upper right, 0.2mm scale), Sunset Red at 60x magnification (lower left, 0.5mm scale), and Sunset Red at 60x magnification (lower right, 0.2mm scale).

Chacluum Black

Basis of Division
Thin-walled sherds with thin, glossy black slip.

Named Parallel(s)
Chacluum Black at Lubaantun (Hammond 1975) and Uxbenká (Jordan 2019); called Ekluum Black at Nim Li Punit (Fauvelle 2012). There are two paste variants at Uxbenká: a yellow-to-tan paste and a dark-red paste. Fauvelle (2012:35-36) identified a soft yellow paste variant and a hard brown paste variant at Nim Li Punit. Both of the paste variants at Nim Li Punit are likely subsumed into the yellow to tan variant at Uxbenká. This type has not been previously identified outside of Southern Belize, with some evidence of Chacluum at Pacbitun (Jordan 2018). There are only two body sherds of Chacluum Black in the surface collection ceramics from Alabama, representing 0.0007% of the assemblage.

Dating
Late to Terminal Classic.

Paste and Firing

The paste is tan (10YR 5/4; 10YR 6/4) and does not have a dark core. The fabric is fine and well sorted and is composed of rounded to subrounded sand. The distribution is unimodal, suggesting that this fabric was not tempered. The sand is composed primarily of quartz, although polycrystalline quartz and/or rock fragments, muscovite, and unknown black inclusions are also present (Figure 6.24).

Forms and Dimensions
Chacluum Black at Alabama, as at most other sites, is represented primarily by thin body sherds ranging in thickness (5mm to 7.5mm). Elsewhere, Chacluum Black is primarily represented by bowl forms, although jar forms have also been documented.

Surface Finish and Decoration
Thin, glossy, black slip on both interior and exterior surfaces. The slips are very eroded at Alabama but when better preserved they are often crazed.

Figure 6.24: Chacluum Black (left), and at 60x magnification (right, 0.5mm scale).

Southern Belize (Toledo-Beds-Derived Clays)

Basis of Division
Ceramics that may have a provenance in Southern Belize have a deep-red to reddish-brown paste that consists of moderately to well-sorted sandy clay with sandy temper. These sherds are sandy but much better sorted than those that were likely produced in the Stann Creek District.

Named Parallel(s)
Remate Red and Turneffe Unslipped at Lubaantun (Hammond 1975), Nim Li Punit (Fauvelle 2012), and Uxbenká (Jordan 2019).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is reddish brown (2.5YR 4/6; 2.5YR 5/6; 5YR 4/6), occasionally with a dark grey to black core. The fabric is moderately sorted to well sorted and consists of rounded to subangular sand composed primarily of quartz. A lack of larger, angular, bimodally distributed inclusions indicate that this fabric was not tempered. There is variation within this group, but the red, well-

sorted, sandy clays suggest that they derive from clay atop the Toledo Beds. Occasional iron nodules (rounded, equant to elongated) (Figure 6.25).

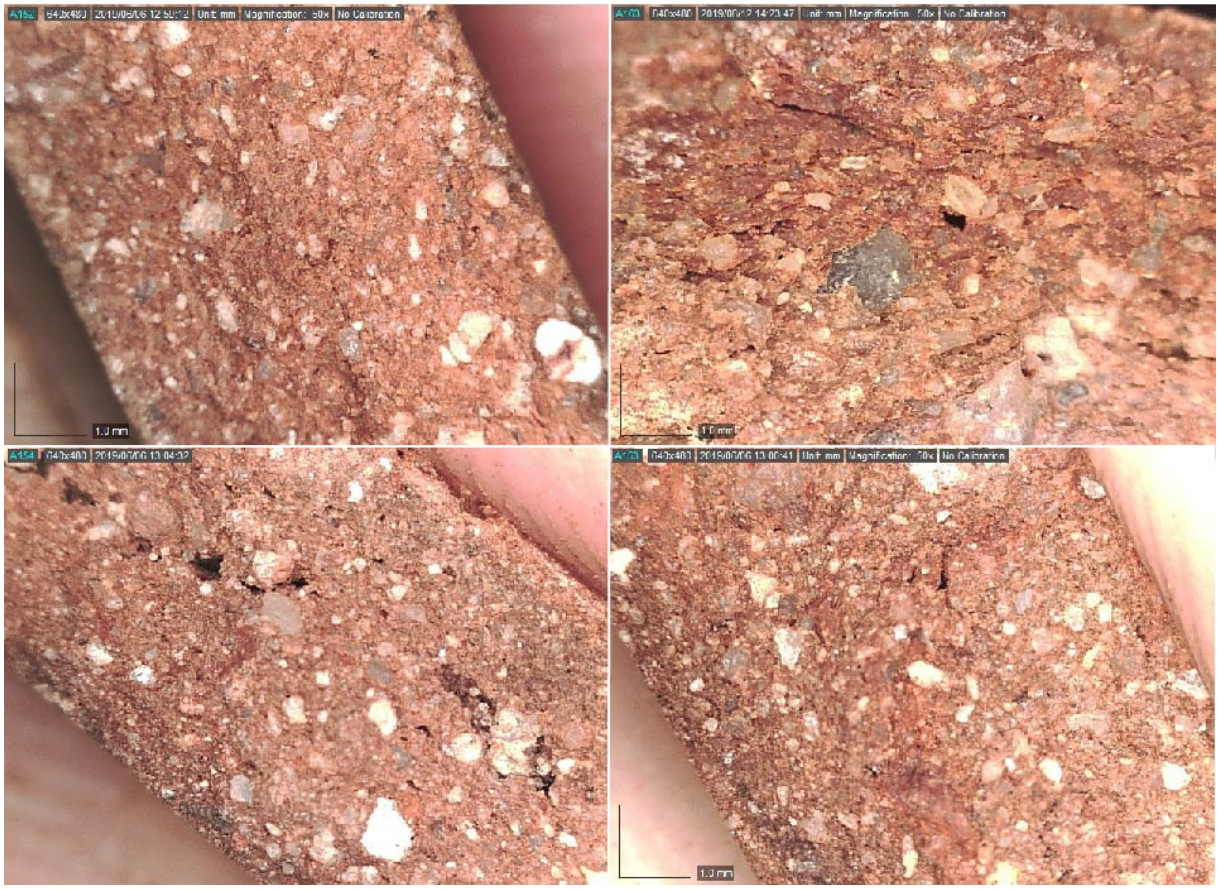

Figure 6.25: Possible Southern Belize pottery. Images at 50x magnification (1.0mm scale).

Analysis of Operation 1 Surface Collection Ceramics

All surface collected diagnostic rim sherds (n=225) and body sherds (n=2696) from the Alabama settlement area (outside of the monumental core) were analyzed and assigned to different categories to facilitate spatial comparisons. The analysis included all ceramics collected as part of Operation 1, which consists of 9 'blocks' of settlement that included 157 mounds and 41 artifact scatters (Peuramaki-Brown et al. 2014, 2015). The data (Table 6.2) are organized according to settlement block. The process was tedious but necessary to identify differences because diagnostic rim sherds are rare. The first sort of a lot included separating sherds (both diagnostic and body sherds) into two groups: 1) carbonate removed and, 2) non-carbonate and non-carbonate + carbonate-removed inclusions.

Table 6.2: Sandy, carbonate, and ash body sherds organized by settlement block.

	Sandy	Carbonate	Ash	Total
Block 1				
Count	122	24	0	146
Percent	83.5	16.5	0	
Block C1				
Count	205	195	10	410
Percent	50.0	47.6	2.4	
Block C2				
Count	238	203	3	444
Percent	53.6	45.7	0.7	
Block D				
Count	731	437	14	1182
Percent	61.8	37.0	1.2	
Block 2				
Count	96	35	6	137
Percent	70.1	25.5	4.4	
Block E				
Count	70	46	0	116
Percent	60.3	39.7	0	
Block B				
Count	172	69	11	252
Percent	68.3	27.3	4.4	
Block A2				
Count	5	4	0	9
Percent	55.5	44.5	0	
TOTAL				**2696**

Sherds with carbonate removed due to post-depositional leaching are identified based on their extremely light weight (some float in water), abundant pock marks on the surface, and voids in cross-section where carbonate inclusions were located prior to their removal. There is no known limestone outcrop in the vicinity of Alabama and much of the Stann Creek District in general, so these sherds are assumed to be non-local to the site at this time. Rounded, limestone fragments have been recovered from some excavation units at Alabama, suggesting that they were recovered from one of the drainages in the area; however, even if the inhabitants had access to carbonate cobbles it is unlikely that they were using them as a primary source of temper for pottery production, as they are uncommon in the area. Carbonate inclusions are abundant and varied in pottery produced in many locations in the Maya lowlands so provenance is impossible to determine unless rim sherds can be typed and assigned provenance based on form and/or surface treatment. However, raw counts may be important to determine if there are spatial and/or temporal differences in pottery consumption at Alabama.

Table 6.3: Sandy, carbonate, and ash sherds organized by settlement site type.

	Sandy	Carbonate	Ash	Total
Type 1				
Count	1061	691	30	1782
Percent	59.5	38.8	1.7	
Type 2				
Count	234	132	9	375
Percent	62.4	35.2	2.4	
Type 3				
Count	103	70	2	175
Percent	58.9	40	1.1	
Type 6				
Count	52	42	3	97
Percent	53.6	43.3	3.1	
TOTAL				**2429**

Some of the carbonate wares that have been assigned to a specific ceramic group and/or type include Mount Maloney Black, Garbutt Creek Red, and Dolphin Head Read from the Belize River Valley, and Hondo Red from Southern Belize. In most cases, carbonate sherds were sorted into slipped and unslipped body sherd categories and rim sherds were assigned to a general carbonate category. Slipped sherds are underrepresented due to the acidic soils in the area. Non-carbonate sherds (e.g., sandy wares) were assigned to one of the paste wares defined in the previous section or categorized as unknown. Volcanic ash sherds were also documented. The analyses were designed to facilitate different kinds of comparison (e.g., sandy vs. carbonate, abundance of particular paste wares between settlement groups and blocks). The 225 diagnostic rims were analyzed more completely and assigned to a paste ware, or known ceramic type, when possible. The number of sherds with carbonate was surprising given that they were produced outside of the Stann Creek District. The surface collected material from Block C1 contained almost half carbonate sherds (47.6%). Block C2 (45.7% carbonate), Block E (39.7% carbonate), and Block D (37.0% carbonate) also have significant quantities of carbonate sherds. Blocks with less carbonate sherds contained the most ash wares (Block 2 and Block B, both have 4.4.% ash wares). These data indicate that a significant portion the pottery from some contexts at Alabama was of non-local origin, which is striking given that households normally provision themselves with locally acquired ceramics. There is not an appreciable difference in the types of pottery when the data are considered with reference to settlement site type (Table 6.3). Type 6 mounds have more carbonate sherds (43.3%) than other types, but Type 1 mounds also have abundant carbonate sherds (38.8%). These preliminary data suggest that households, regardless of size and architectural elaboration, had access to non-local pottery in significant quantities.

Table 6.4: Analysis of diagnostic, surface-collected ceramics (Operation 1 at Alabama).

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
Block 1									
ALA-112	233	Unknown	Neck	Jar					
S024	235	Ware 1	Rim	Bowl	Incurving	Direct	Rounded	25	No
S024	235	Unknown	Rim	Dish/Bowl	Incurving	Direct	Rounded		Rounded
S027	239	Unknown	Neck	Jar					
ALA-113	240	Ware 1	Rim	Dish/Bowl	Incurving	Direct	Beveled Out		No
ALA-114	241	Unknown	Rim	Dish/Bowl		Direct	Beveled In		Yes
S028	242	Unknown	Neck	Jar					
S028	242	Ware 1	Rim	Incurving Bowl	Incurving	Direct	Beveled In		No
S028	242	Ware 1	Rim	Bowl/Dish	Flared Sides	Exterior Thickened	Beveled In	35	
S028	242	Unknown	Base?	Flat					
Block C1									
ALA-079	131	Ware 2	Neck	Jar	Outcurved Neck				
ALA-047B	134	Ware 9	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-047B	134	Hondo	Rim	Jar	Outcurved Neck	Direct	Squared		No
ALA-047B	134	Unknown	Neck	Jar	Outcurved Neck				No
ALA-047B	134	Toledo?	Rim	Bowl	Incurving Sides	Beveled In	Rounded		Yes
ALA-047B	134	Unknown	Neck	Jar	Outcurved Neck				No
ALA-047A	135	Carbonate	Rim	Bowl	Slightly Incurved Sides	Direct	Rounded		No
ALA-047C	136	Ware 2?	Rim	Bowl/Dish	Flared Sides				
ALA-047C	136	Ware 2, Type 3?	Rim	Unknown		Exterior Thickened	Rounded		No
ALA-081	137	Ware 9	Rim	Bowl	Outcurved Sides	Direct	Exterior Thickened		No
ALA-081	137	Ware 9	Rim	Bowl?	Straight Sides	Direct	Rounded		No
ALA-044	138	Ware 1	Neck	Jar	Outcurved Neck				No
ALA-045A	140	Ware 1	Rim	Bowl?	Flared Sides	Outflared Everted with Groove Incision	Rounded		No
ALA-082	142	Ware 5	Neck	Jar	Outcurved Neck				
ALA-082	142	Ware 5?	Rim	Jar	Outcurved Neck	Exterior Thickened	Rounded		
ALA-083	143	Ware 1	Rim	Bowl	Slightly Incurved Sides	Direct	Rounded		No
ALA-083	143	Ware 1	Rim	Bowl	Slightly Incurved Sides	Direct	Rounded		No
ALA-084	145	Ware 9	Rim	Bowl	Vertical Sides	Direct	Rounded	20	No
ALA-084	145	Ware 9	Rim	Bowl	Vertical Sides	Exterior Folded	Rounded	20	No
ALA-084	145	Ware 9	Rim	Bowl	Vertical Sides	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-084	145	Unknown	Rim	Jar	Outcurved Neck	Outflared Everted	Rounded		No
ALA-084	145	Ware 2, Type 3?	Neck	Jar					Burned
ALA-084	145	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Ware 7	Neck	Jar	Outcurved Neck				No
ALA-084	145	Hondo	Neck	Jar	Outcurved Neck				No
ALA-084	145	Unknown	Rim	Plate/Dish	Flared Sides	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Neck	Jar	Outcurved Neck				No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Squared		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Bowl	Incurved Sides with Outflared Neck	Direct	Rounded		No
ALA-085	146	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded	20	Burned
ALA-085	146	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded		
S009	147	Toledo	Rim	Unknown	Outcurved Neck	Direct	Rounded		No
S009	147	Toledo	Body	Unknown					No
Block C2									
ALA-003	29	Carbonate	Appendage	Foot	Solid Oven Foot				
ALA-003	29	Ash	Body	Incised					
ALA-004B	31	Hondo	Rim	Bowl	Incurved Sides		Rounded		No
ALA-004B	31	Ware 2	Neck	Jar	Outcurved Neck				No
ALA-007	34	Ware 2	Neck	Jar	Outcurved Neck				No
ALA-008	35	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-008	35	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-008	35	Ware 1	Rim	Unknown			Rounded		No
ALA-008	35	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-009A	36	Ware 1	Rim	Unknown			Rounded		No
ALA-009B	37	Dolphin Head	Rim	Bowl/Dish	Flared Sides	Direct	Rounded	25	No
ALA-009B	37	Dolphin Head	Rim	Bowl/Dish	Flared Sides	Direct	Rounded		No
ALA-016	44	Hondo (Sunset	Neck	Jar					No
ALA-016	44	Ware 9	Rim	Unknown			Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-016	44	Ware 2	Rim	Bowl/Dish	Flared Sides	Direct	Rounded		No
ALA-016	44	Ware	Neck	Jar					Yes
ALA-016	44	Unknown	Neck	Jar					No
ALA-016	44	Ware 4	Rim	Bowl?	Flared Sides	Direct	Exterior Thickened		Yes
ALA-017	45	Toledo?	Rim	Bowl?	Unknown	Outflared Everted	Rounded	35	Yes
ALA-018	46	Ware 2	Rim	Unknown			Rounded		No
ALA-018	46	Ware 9	Rim	Unknown			Rounded		No
ALA-020A	48	Ware 1	Rim	Bowl	Incurved Sides with Outflared Neck	Direct	Rounded		No
ALA-020A	48	Ware 1	Rim	Unknown			Rounded		No
ALA-020B	49	Ware 1	Rim	Unknown			Rounded		No
ALA-021	50	Ware 4	Neck	Jar	Outcurved Neck				No
ALA-021	50	Ware 5	Rim	Bowl	Incurved Sides	Direct	Interior Thickened		No
ALA-021	50	Ware 5	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-021	50	Ware 9	Rim	Unknown			Rounded		No
ALA-022	51	Hondo	Rim	Jar	Vertical Neck	Direct	Rounded		No
Block D									
ALA-024	54	Ash	Rim	Bowl	Incurving Sides	Direct	Rounded		No
ALA-024	54	Carbonate	Vase?						
ALA-025	55	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-025	55	Ware 2	Rim				Rounded		No
ALA-026	56	Ware 1	Appendage						No
ALA-027	57	Ware 2	Rim	Plate/Dish	Outflared Sides	Direct	Rounded		No
ALA-027	57	Ware 9	Rim	Bowl	Straight Sides	Direct	Rounded		No
ALA-029A	58	Unknown	Neck	Jar	Outcurved				No
ALA-033	63	Ware 9	Rim	Bowl		Direct	Rounded		No
ALA-034A	64	Ware 1	Rim	Dish	Outflared Sides	Direct	Rounded	34	No
ALA-039	68	Ware 1	Rim	Bowl	Incurved Sides	Interior Thickened	Rounded		No
ALA-039	68	Ware 1	Rim	Jar?					No
ALA-039	68	Unknown	Neck	Jar?	Outcurved Neck				
ALA-039	68	Ware 2	Rim				Rounded		No
ALA-038B	69	Ash	Rim	Dish	Flared Sides	Everted	Rounded		No
ALA-036	71	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		Yes
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 9	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-056A	88	Ware 1	Rim	Jar?	Outcurved	Direct	Rounded		No
ALA-056A	88	Unknown	Rim	Dish	Flared Sides	Direct	Rounded		No
ALA-056A	88	Ware 9	Rim	Unknown			Rounded		No
ALA-056A	88	Ware 2	Body	Fingernail Impressions					No
ALA-056A	88	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded	5	Yes
ALA-056A	88	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		Yes
ALA-057A	90	Unknown	Rim	Bowl/Dish	Flared Sides	Direct	Rounded		No
ALA-056B	94	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-056B	94	Ware 9	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-056B	94	Hondo	Body	Molded					No
ALA-059	97	Ash	Rim	Plate/Dish	Flared Sides	Beveled In	Rounded		No
ALA-059	97	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Squared		No
ALA-059	97	Ware 1	Rim	Unknown		Direct	Rounded		No
ALA-059	97	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-059	97	Ware 2	Neck	Jar	Outcurved Neck				
ALA-059	97	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-059	97	Carbonate	Rim	Unknown		Direct	Rounded		No
ALA-060	98	Ware 9	Rim	Bowl?	Straight Sides	Exterior Thickened	Beveled In		No
ALA-060	99	Ware 9	Rim	Unknown	Unknown	Exterior Thickened	Beveled In		No
ALA-060	99	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-062	100	Carbonate	Rim	Unknown			Rounded		No
ALA-062	100	Ware 2	Rim	Dish	Flared Sides	Direct	Rounded	20	No
ALA-062	100	Carbonate	Neck	Jar	Outcurved Neck				No
ALA-062	100	Ware 4	Rim	Jar	Outcurved Neck	Direct	Rounded	20	
ALA-062	100	Hondo (Sunset)	Rim	Jar	Outcurved Neck	Direct	Rounded	10	
ALA-062	100	Hondo (Sunset)	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-062	100	Carbonate	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-062	100	Carbonate	Rim	Bowl	Incurved Sides	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-062	100	Hondo (Sunset)	Base	Flat					No
ALA-062	100	Unknown	Pot lid?						
ALA-063	101	Ware 9	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-063	101	Ware 9	Rim	Bowl?	Incurved Sides	Direct	Rounded		No
ALA-063	101	Ware 9	Rim	Bowl	Flared Sides	Direct	Beveled In		No
ALA-063	101	Carbonate	Rim	Jar?		Direct	Rounded		No
ALA-064	102	Ware 4	Rim	Jar	Outcurved Neck	Direct	Squared		No
ALA-065	111	Ware 9	Neck	Jar?					No
ALA-067	113	Ash	Rim	Dish/Plate	Flared Sides	Direct	Rounded		No
ALA-067	113	Unknown	Unknown				Rounded		No
ALA-069	116	Ware 9	Rim	Jar?	Outcurved Neck	Direct	Squared		No
ALA-069	116	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-048	119	Carbonate	Ring Base						
ALA-048	119	Hondo (Sunset)	Ring Base						
ALA-048	119	Ware 10?	Rim	Jar	Outflared Everted	Direct	Rounded		Yes
ALA-048	119	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-070	120	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-073	124	Ware 9	Rim	Unknown			Rounded		No
ALA-074	126	Hondo (Sunset)	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Hondo (Sunset)	Appendage	Foot	Hollow Oven				No
ALA-074	126	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Toledo	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Ware 2	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Ware 2	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-075	127	Toledo Beds?	Rim	Bowl/Dish	Flared Sides	Direct	Squared		No
ALA-075	127	Ware 2	Rim	Bowl/Dish	Flared Sides	Direct	Beveled In		No
ALA-075	127	Unknown	Rim	Bowl/Dish	Flared Sides	Direct	Beveled In		No
ALA-078	130	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-031A/B	73/76	Ware 1	Rim	Bowl/Dish	Flared Sides	Exterior Thickened	Rounded		No
Block 2									
ALA-119	254	Ware 6	Rim	Jar	Outcurved Neck	Direct	Rounded	15	No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-119	254	Ware 6	Neck						
ALA-121	259	Ware 4	Neck	Jar	Outcurved Neck				No
ALA-121	259	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded	15	No
ALA-122A	263	Unknown	Neck	Jar	Outcurved				No
ALA-122A	263	Unknown	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-122A	263	Carbonate	Rim	Bowl	Incurved Sides	Direct	Beveled In		No
ALA-122A	263	Unknown	Base		Flat				
ALA-122B	264	Unknown	Rim	Bowl?		Direct	Rounded		No
ALA-122B	264	Hondo?	Foot		Solid Slab Foot				No
ALA-125	268	Ware 8	Neck	Jar	Outcurved Neck				No
ALA-126	272	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-126	272	Carbonate	Neck	Jar?	Outcurved Neck				No
ALA-126	272	Ware 4	Rim	Jar?	Outcurved Neck	Outflared Everted	Rounded		No
ALA-121	259	Ware 1	Neck	Jar	Outcurved Neck				No
ALA-121	259	Carbonate	Rim	Unknown			Rounded		No
Block E									
ALA-117	248	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S031	251	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S031	251	Carbonate	Rim	Dish/Plate	Flared Sides	Outflared Everted	Beveled In		No
S031	251	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded	15	No
S031	251	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S031	251	Ware 4	Rim	Bowl/Dish?	Flared Sides	Direct	Rounded	40	Yes
S031	251	Hondo (Sunset)	Rim	Jar	Outcurved Neck	Direct	Rounded	25	No
S031	251	Hondo (Sunset)	Neck	Jar	Outcurved Neck				No
S031	251	Hondo (Sunset)	Appendage	Foot	Hollow				No
S031	251	Hondo (Sunset)	Appendage	Foot	Hollow				No
S031	251	Hondo (Sunset)	Appendage	Foot?	Hollow Slab				No
S031	251	Ware 10	Appendage	Foot	Hollow Oven				
S031	251	Carbonate	Rim	Bowl	Incurved Sides	Interior Thickened	Rounded		Burned
S031	251	Unknown	Rim	Bowl	Incurved Sides	Direct	Rounded	25	
S031	251	Unknown	Rim	Jar	Outcurved Neck	Exterior Thickened	Rounded	15	
S031	251	Unknown	Neck	Jar	Outcurved Neck				

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
S031	251	Unknown	Rim	Jar?		Direct	Rounded		
S033	253	Ware 2	Rim	Bowl	Incurved Sides	Interior Thickened	Beveled In		No
Block B									
ALA-097B	191	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-097B	191	Carbonate	Rim	Jar?		Direct	Rounded		No
ALA-097B	191	Northern	Rim	Jar?		Outflared Everted	Rounded		No
ALA-086B	168	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-086B	168	Ware 1	Rim	Bowl?	Incurved Sides	Direct	Rounded		No
ALA-086B	168	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-087	169	Ware 9	Rim	Unknown			Rounded		No
ALA-088	170	Ware 1	Rim	Unknown			Rounded		No
ALA-089	171	Ware 1	Neck	Jar	Outcurved Neck				No
ALA-089	171	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl?		Direct	Rounded	40	No
S011	173	Ware 9	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S011	173	Unknown	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-091	177	Unknown	Base?						
ALA-094C	186	Ware 1	Rim	Unknown		Outcurved	Rounded		No
ALA-094C	186	Ware 9	Rim	Unknown		Direct	Rounded		No
ALA-095	188	Ware 9	Neck	Jar	Outcurved Neck				No
ALA-095	188	Coastal?	Base	Flat					
ALA-097A	190	Ware 1	Rim	Bowl/Dish?	Flared Sides	Exterior Thickened	Rounded		No
ALA-097A	190	Ware 1	Rim	Unknown			Rounded		No
ALA-098	194	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-100B	200	Ware 9	Rim	Bowl	Incurved Sides	Beveled In	Rounded		No
ALA-104B	210	Ware 1	Rim	Unknown		Direct	Rounded		No
ALA-104B	210								
ALA-106	212	Ware 2	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-092/S016	180/181	Northern	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-094A/B	184/185	Coastal?	Rim	Dish/Plate	Flared Sides	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-094A/B	184/185	Ware 1	Rim	Bowl?		Direct	Rounded		No
ALA-094A/B	184/185	Ware 1	Rim	Bowl	Incurved Sides	Interior Thickened	Rounded		No
ALA-094A/B	184/185	Unknown	Rim	Bowl?		Interior Thickened	Rounded		No
ALA-094A/B	184/185	Unknown	Neck	Jar					

Table 6.5: Counts of non-diagnostic, surface-collected ceramics by type (Operation 1 at Alabama).

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
Block 1																													
233	ALA-112	28	1	27	3	21	24	4	0	0	0	0	0	0	0	0	0	0	0	20	1	2	3	0	0	3	0	0	0
235	S024	10	2	8	2	5	7	2	0	0	0	0	0	0	0	0	0	0	0	5	1	0	1	0	1	0	0	0	0
237	S026	21	0	21	1	20	21	4	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0
239	S027	17	1	16	4	6	10	1	0	0	0	0	0	0	0	0	0	1	0	8	6	0	6	0	3	3	0	0	0
240	ALA-113	14	1	13	4	5	9	0	3	0	0	0	0	0	0	0	2	0	0	4	2	2	4	0	2	2	0	0	0
241	ALA-114	10	1	9	0	5	5	0	0	0	0	0	0	0	0	0	2	0	0	3	3	1	4	0	0	4	0	0	0
242	S028	40	5	35	6	27	33	20	0	0	0	0	0	0	0	0	0	0	0	13	2	0	2	0	0	2	0	0	0
245	S029	5	0	5	0	5	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
243/244	ALA-115	12	0	12	0	8	8	1	0	0	0	0	0	0	0	0	0	0	0	7	2	2	4	0	0	4	0	0	0
Block C1																													
131	ALA-079	69	1	69	11	22	33	4	5	0	5	0	3	0	0	1	1	1	0	13	21	14	35	8	9	18	0	0	1
132	ALA-080	28	0	28	2	11	13	0	3	0	0	0	0	0	0	0	1	0	0	9	1	13	14	0	0	14	0	0	1
133	S008	4	0	4	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2	2	0	0	2	0	0	0
134	ALA-047B	52	5	47	10	17	27	0	0	0	0	5	5	0	0	0	4	0	0	13	9	9	18	3	0	15	0	0	2
135	ALA-047A	8	2	7	0	6	6	1	0	3	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0
136	ALA-047C	33	2	31	3	14	17	2	0	7	0	0	1	2	0	0	0	0	0	5	7	6	13	1	2	10	0	0	1
137	ALA-081	16	2	14	4	4	8	0	0	0	1	0	0	0	0	0	0	0	0	7	0	4	4	0	0	4	0	0	2
138	ALA-044	8	1	8	0	4	4	0	0	0	0	0	0	0	0	1	0	0	0	3	3	1	4	0	3	1	0	0	0
139	ALA-045B	7	0	7	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	2	1	3	4	0	1	3	0	0	0
140	ALA-045A	13	1	12	0	8	8	1	0	0	0	0	1	0	0	0	1	0	0	5	2	2	4	2	0	2	0	0	0
141	ALA-045C	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	ALA-082	3	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
143	ALA-083	13	2	11	0	6	6	1	0	0	0	0	2	1	0	0	0	0	0	2	2	3	5	2	0	3	0	0	0
144	ALA-043	19	0	19	2	12	14	3	0	0	0	1	0	0	0	0	0	2	0	8	3	1	4	2	1	1	0	0	1
145	ALA-084		17	98	14	19	33	0	5	0	0	0	0	0	0	0	0	3	0	25	47	16	63	5	9	49	0	0	2

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
146	ALA-085	22	2	20	3	9	12	2	1	0	0	2	0	0	0	0	0	0	0	7	3	5	8	0	3	5	0	0	0
147	S009	28	2	25	6	8	14	0	0	0	0	0	3	0	0	0	0	3	0	8	5	6	11	0	4	7	0	0	0
148	ALA-046	8	0	8	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	5	1	0	4	0	0	0
Block C2																													
25	ALA-002A	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	2	0	0	0
29	ALA-003	29	2	27	1	5	6	0	1	0	0	0	0	0	0	0	0	0	0	5	0	21	21	0	3	18	0	0	0
30	ALA-004A	16	0	16	1	6	7	3	1	0	0	0	0	0	0	0	1	0	0	2	0	9	9	0	5	4	0	0	0
31	ALA-004B	26	2	24	2	6	8	2	2	0	1	0	0	0	0	0	1	0	0	2	0	16	16	0	2	14	0	0	0
32	ALA-005	6	0	6	0	5	5	2	0	1	0	0	0	0	0	0	0	0	0	2	0	1	1	0	1	0	0	0	0
33	ALA-006	8	0	8	0	6	6	2	0	0	0	0	0	0	0	0	0	0	0	4	0	2	2	0	0	2	0	0	0
34	ALA-007	36	1	35	9	20	29	8	9	2	0	0	0	0	0	0	0	0	0	10	0	5	5	1	0	4	0	0	1
35	ALA-008	41	4	38	8	20	28	10	8	0	0	0	0	0	0	0	1	0	0	9	0	10	10	3	2	5	0	0	0
36	ALA-009A	27	1	26	0	10	10	3	0	0	0	0	0	1	0	0	1	0	0	5	8	8	16	0	3	12	0	1	0
37	ALA-009B	15	2	13	0	7	7	1	3	0	0	0	0	0	0	0	0	1	0	2	3	3	6	0	2	4	0	0	0
38	ALA-010	14	0	14	1	5	6	0	0	0	0	0	0	0	0	0	2	0	0	4	0	8	8	0	5	3	0	0	0
39	ALA-011	13	0	14	0	11	11	3	5	0	1	0	0	0	0	0	0	0	0	2	0	3	3	0	0	3	0	0	0
40	ALA-012	45	0	45	5	18	23	3	5	0	0	0	0	0	0	0	0	0	0	15	0	22	22	0	9	13	0	0	0
44	ALA-016	75	6	69	13	20	33	2	9	2	2	0	0	0	0	0	5	0	0	13	10	26	36	6	9	20	0	1	0
45	ALA-017	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	ALA-018	28	2	26	4	14	18	0	6	0	3	0	0	0	0	0	2	0	0	7	5	3	8	0	4	4	0	0	0
47	ALA-019	10	0	10	0	4	4	0	0	0	0	0	0	0	0	0	1	0	0	3	0	6	6	1	1	4	0	0	0
48	ALA-020A	17	2	15	4	6	10	2	0	4	0	0	0	0	0	0	0	0	0	4	1	4	5	0	0	5	0	0	0
49	ALA-020B	23	1	31	5	5	10	2	5	0	0	0	0	0	0	0	1	0	0	2	5	14	19	0	4	15	0	0	2
50	ALA-021	25	4	21	7	8	15	0	7	0	0	0	0	1	0	0	0	0	0	7	0	6	6	3	3	0	0	0	0
51	ALA-022	5	1	4	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	1	1	0	0	0
Block D																													
23	ALA-001	9	0	9	0	4	4	1	3	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
52	ALA-023A	10	0	9	0	7	7	0	0	0	0	0	0	1	0	0	0	0	0	6	1	1	2	0	1	1	0	0	0
53	ALA-023B	12	1	12	0	5	5	0	1	0	0	0	0	0	0	0	1	0	0	3	2	5	7	0	1	6	0	0	0
54	ALA-024	28	2	26	1	18	19	6	0	5	0	0	3	1	0	0	0	0	0	4	0	7	7	0	3	4	0	0	0
55	ALA-025	44	2	42	2	34	36	27	0	4	0	1	0	0	0	0	0	0	0	4	0	6	6	0	6	0	0	0	0
56	ALA-026	22	1	21	0	17	17	12	0	0	0	0	0	0	0	0	0	0	0	5	0	2	2	0	0	2	0	0	2
57	ALA-027	25	1	24	0	12	12	6	0	0	0	0	0	0	0	0	2	0	0	4	8	4	12	1	7	4	0	0	0
58	ALA-029A	9	1	8	0	6	6	0	3	0	0	0	0	0	0	2	1	0	0	0	2	0	2	0	0	2	0	0	0
59	ALA-028	9	0	9	0	7	7	5	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	2	0	0	0
60	ALA-029B	8	0	8	2	4	6	0	2	0	0	0	0	0	0	0	0	0	0	4	2	0	2	0	2	0	0	0	0
63	ALA-033	9	0	9	0	8	8	2	0	0	0	0	0	0	0	0	2	0	0	4	0	1	1	0	0	1	0	0	0
64	ALA-034A	8	1	7	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
65	ALA-034B	4	0	4	0	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
66	ALA-037	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	0
67	ALA-038A	36	0	36	0	33	33	25	6	0	0	0	0	0	0	0	0	0	0	2	1	1	2	0	1	1	0	0	1
68	ALA-039	84	4	81	15	40	55	26	8	0	6	0	5	0	0	5	1	0	0	4	18	8	26	2	12	12	0	0	0
69	ALA-038B	19	1	18	0	9	9	6	0	0	0	0	0	0	0	0	1	0	0	2	6	3	9	0	5	4	0	0	0
71	ALA-036	8	1	7	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	6	0	0	0	0
72	ALA-035	11	0	12	1	5	6	0	1	0	0	0	0	0	0	0	1	0	0	4	1	4	5	0	0	5	0	0	1
73/76	ALA-031A/B	11	1	10	0	10	10	7	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
74	ALA-032	3	0	3	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
75	ALA-040	10	0	10	0	4	4	3	0	1	0	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	0	0	0
77	ALA-041	8	0	8	0	7	7	0	0	0	0	0	0	0	0	0	1	0	0	6	1	0	1	0	0	1	0	0	0
78	ALA-030	3	0	3	2	0	2	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	1	0	0	0	0	0
79	ALA-042	8	0	8	0	8	8	2	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
83	ALA-051	37	5	32	4	18	22	9	3	2	0	0	0	0	0	0	0	0	0	8	8	2	10	0	6	4	0	0	0
84	ALA-052	12	0	12	0	11	11	6	0	0	1	0	0	0	0	0	0	0	0	4	1	0	1	0	1	0	0	0	0
85	ALA-053	19	0	19	0	13	13	4	0	0	0	0	0	0	0	0	0	2	0	7	2	4	6	0	1	5	0	0	0
86	ALA-054	8	0	8	0	7	7	3	0	0	0	0	0	0	0	0	0	1	0	3	0	1	1	0	0	1	0	0	0
87	ALA-055	11	0	11	1	4	5	1	0	0	0	0	0	0	0	0	0	0	0	4	6	0	6	2	3	1	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
88	ALA-056A	67	6	61	5	24	29	9	3	6	1	4	0	0	0	0	1	0	0	5	0	31	31	1	6	24	0	0	1
90	ALA-057A	18	1	17	7	4	11	2	4	0	0	0	0	0	0	0	1	0	0	4	2	3	5	1	2	2	0	0	1
91	ALA-057B	9	0	9	0	6	6	1	2	0	0	0	0	0	0	0	0	0	0	3	1	2	3	0	0	3	0	0	0
92	ALA-058	5	0	5	0	4	4	0	1	0	0	0	0	0	0	0	0	0	0	3	1	0	1	1	0	0	0	0	0
93	ALA-057C	12	0	12	1	3	4	0	1	0	0	0	0	0	0	0	0	0	0	3	7	1	8	1	1	4	1	1	0
94	ALA-056B	23	3	20	0	13	13	3	2	1	0	0	0	4	0	0	1	0	0	2	0	7	7	1	4	2	0	0	0
95	S002	5	0	5	0	5	5	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
96	ALA-057D	5	0	5	0	4	4	1	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	1	0	0	0	0
97	ALA-059	29	7	20	0	13	13	0	0	0	0	2	0	0	0	2	6	0	0	3	2	5	7	0	0	7	0	0	0
98	ALA-060	24	1	23	1	15	16	1	0	0	0	0	0	0	0	0	9	1	0	5	3	4	7	0	1	6	0	0	0
99	ALA-061	26	2	24	1	7	8	3	0	0	0	0	0	0	0	0	2	2	0	1	4	12	16	2	2	12	0	0	0
100	ALA-062	92	10	82	10	21	31	0	8	0	1	0	0	0	0	0	5	0	0	17	20	30	50	12	14	24	0	0	1
101	ALA-063	61	4	57	6	21	27	0	12	0	0	0	0	3	0	0	12	0	0	0	10	20	30	0	5	25	0	0	0
102	ALA-064	16	1	14	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	3	8	11	0	2	9	0	0	1
103	S003	9	0	8	0	4	4	1	1	1	0	0	0	0	0	0	0	0	0	1	1	3	4	0	1	3	0	0	0
111	ALA-065	22	1	21	2	2	4	0	0	0	0	0	0	0	0	0	3	0	0	1	10	7	17	3	5	9	0	0	0
112	ALA-066	19	0	18	0	12	12	9	2	0	0	0	0	0	0	0	1	0	0	0	1	5	6	0	2	4	0	0	0
113	ALA-067	17	2	15	9	2	11	2	2	0	0	0	0	0	0	0	2	0	1	4	0	4	4	0	0	4	0	0	0
115	ALA-068	7	0	7	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
116	ALA-069	19	2	17	0	5	5	1	0	0	0	0	0	0	0	0	2	0	0	2	6	6	12	0	5	5	0	2	0
119	ALA-048	62	4	58	13	28	41	4	9	4	0	3	0	4	0	0	5	0	0	12	8	9	17	0	6	11	0	0	0
120	ALA-070	33	1	32	0	17	17	2	0	6	0	2	0	2	0	0	1	0	0	4	5	6	11	1	2	8	0	0	4
122	ALA-071	2	0	2	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
123	ALA-072	7	0	7	0	7	7	1	2	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
124	ALA-073	15	1	14	1	9	10	4	1	0	0	0	1	0	0	0	3	0	0	1	0	3	3	0	0	3	0	0	1
126	ALA-074	87	7	80	19	24	43	14	16	3	0	1	6	0	0	0	1	0	0	2	14	23	37	2	12	23	0	0	0
127	ALA-075	64	3	62	9	40	49	9	7	0	0	0	0	0	0	0	8	0	0	25	10	2	12	2	6	4	0	0	1
129	ALA-077	11	0	11	0	11	11	6	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0
130	ALA-078	9	1	8	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7	7	0	1	6	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
Block 2																													
223	ALA-111	4	0	4	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
254	ALA-119	11	2	11	3	6	9	0	0	0	0	0	0	0	0	3	0	2	0	4	2	0	2	2	0	0	0	0	0
256	ALA-120	16	0	16	2	6	8	1	2	0	0	0	0	0	0	0	0	0	0	5	4	1	5	2	0	3	0	0	3
259	ALA-121	27	2	25	0	10	10	2	3	0	0	0	0	0	1	0	1	0	0	3	4	10	14	3	5	6	0	0	1
263	ALA-122A	22	4	18	0	16	16	3	0	0	0	0	0	2	0	0	0	0	0	11	0	2	2	0	0	2	0	0	0
264	ALA-122B	2	22	22	2	15	17	7	1	0	1	0	0	0	2	0	0	0	0	6	1	2	3	1	0	2	0	0	2
265	ALA-123	4	0	4	0	3	3	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	1	0	1	0	0	0	0
267	ALA-124	7	0	7	0	4	4	1	0	0	0	0	0	0	0	0	1	0	0	2	0	3	3	1	0	2	0	0	0
268	ALA-125	17	1	16	1	10	11	6	2	0	0	0	0	0	0	0	0	1	0	2	3	2	5	3	2	0	0	0	0
270	S038	8	2	6	1	5	6	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
272	ALA-126	17	4	8	4	4	8	0	3	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Block E																													
248	ALA-117	11	1	10	0	10	10	5	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
251	S031	104	103	89	2	45	47	8	6	8	0	0	2	3	1	2	0	2	0	15	10	32	42	1	12	25	0	4	0
252	S032	13	0	13	2	9	11	1	5	0	0	0	0	0	0	0	0	0	0	5	2	0	2	0	0	2	0	0	0
253	S033	5	1	4	1	1	2	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	2	1	0	0	1	0	0
Block B																													
167	ALA-086A	8	0	8	0	7	7	3	0	0	0	0	0	0	0	0	0	0	0	4	1	0	1	0	1	0	0	0	0
168	ALA-086B	17	3	14	0	13	13	7	0	0	0	0	0	0	0	0	0	0	0	6	0	1	1	0	0	1	0	0	0
169	ALA-087	14	1	13	2	5	7	1	0	0	0	0	2	0	0	0	2	0	0	2	0	6	6	0	0	6	0	0	0
170	ALA-088	4	1	3	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
171	ALA-089	10	2	8	0	7	7	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
173	S011	21	6	15	4	9	13	9	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2	0	0	0	0	2	0
174	ALA-090	6	0	6	0	3	3	1	0	0	0	0	0	0	0	0	1	0	0	1	0	3	3	1	0	2	0	0	0
177	ALA-091	4	1	3	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
179	S015	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0
180/181	ALA-092/S016	16	1	15	1	8	9	4	0	0	0	0	2	0	0	0	0	0	0	3	4	2	6	0	4	1	0	1	0
182	S017	3	0	3	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
183	ALA-093	7	0	7	0	5	5	0	0	0	0	0	0	0	0	0	1	0	0	4	0	1	1	0	0	1	0	0	1
184/185	ALA-094A/B	21	5	16	0	14	14	5	0	0	0	0	0	0	0	0	1	0	0	8	0	2	2	1	1	0	0	0	0
186	ALA-094C	7	2	5	1	4	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	ALA-095	13	2	11	2	6	8	5	3	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	0	0	1
189	ALA-096	6	0	6	0	3	3	2	0	0	0	0	0	0	0	0	1	0	0	0	2	0	2	0	2	0	0	0	1
190	ALA-097A	8	2	6	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
191	ALA-097B	18	3	15	3	7	10	2	0	0	0	0	0	0	1	0	1	2	0	4	5	0	5	3	1	1	0	0	0
194	ALA-098	4	1	3	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
196	ALA-099	4	0	5	0	3	3	0	0	0	0	1	0	0	0	0	1	0	0	1	0	2	2	0	0	1	0	1	0
199	ALA-100A	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0
200	ALA-100B	14	1	14	3	3	6	1	2	0	0	0	0	0	0	0	1	0	0	2	6	2	8	0	3	5	0	0	0
205/206	S021/ALA-101	10	0	11	3	6	9	2	2	0	0	0	0	0	0	0	2	0	0	3	2	0	2	0	0	2	0	0	0
207	ALA-102	2	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
208	ALA-103	6	0	5	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	1	3	1	1	1	0	0	0
209	ALA-104A	24	0	24	3	3	6	0	2	0	0	1	0	0	0	0	1	0	1	1	7	7	14	6	1	7	0	0	4
210	ALA-104B	14	2	12	5	6	11	4	0	0	0	3	0	0	0	0	0	0	0	4	0	1	1	0	1	0	0	0	0
211	ALA-105	3	0	3	2	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
212	ALA-106	1	14	14	3	3	6	0	2	0	0	0	0	0	0	0	2	0	0	2	2	3	5	0	1	4	0	0	3
214	ALA-107B	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0
Block A2																													
261	S037	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
273	ALA-127	8	0	8	0	5	5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	3	3	0	1	2	0	0	0
TOTAL		2761	346	2696	303	1336	1639	435	228	60	23	26	36	26	11	19	122	30	2	618	401	612	1013	98	275	625	2	13	44

Construction Materials

The platform construction materials used in the Alabama monumental core (epicentre) differ from other sites in the Maya lowlands due to the lack of limestone in the area. Facing/dressing stones and stones of core faces are composed of granite, and mortar is often (though not always) applied between these stones, composed of aggregate and what appears to be sandy clay. White floors/surfaces were mentioned in previous reports from the 1980s—though likely incorrectly identified as plaster—and have now been identified in SCRAP excavations; however, these are composed of materials that are not limestone-derived. The terminal level of the East Plaza was investigated as part of 2019 excavations at Structure 1-2, and the surfacing material was found to consist of a white material alongside (vs. vertically stratified) ballast material composed of white stones, or at least stones that are white on the surface, to achieve a white coloured surface. These ballast stones are also not composed of carbonate because they did not react when exposed to hydrochloric acid in the lab. This discovery led SCRAP to initiate a preliminary study of construction materials. The macroscopic observations of construction materials and raw materials collected from various locations were analyzed in the SCRAP field laboratory facility in Maya Centre prior to export for thin sectioning and additional microscopic analysis—these observations are described below. Additionally, we engaged in preliminary experimental studies in 2019, shaping granite blocks, which will continue in coming years. We will also be engaging in future study of daub materials from the site, along with possibly earthen floor materials first recovered in the 2018 field season (see Peuramaki-Brown et al. 2018:50).

Mortar

A sample of mortar (SCRAP-3/Cat. #10465-MM011) was first identified between granite boulders of a core face of Structure 1-2 in the monumental core and collected by S. Morton during 2019 excavations (see Chapter 2, this volume), and subsequently identified in architectural faces of the settlement at ALA-002A and B (see Chapter 3, this volume). Morton and Peuramaki-Brown noted the angularity of the aggregate, and additional analysis was conducted in the laboratory to determine the composition of the aggregate and to collect descriptive data on the sample prior to microscopic analysis and exporting for petrographic analysis. A small sample was dissolved in water and the aggregate was analyzed with a Dino-Lite to determine its composition and angularity (Figure 6.26). The dirt surrounding the aggregate is fine and pale brown (2.5Y 7/3). The aggregate is angular and is comprised of many different grain sizes (up to approximately 12.3mm or “pebble sized”). The inclusions are composed of quartz, muscovite, biotite, and feldspar (likely potassium feldspar and plagioclase). The grains often contain more than one mineral, inconsistent with a natural sand. The angularity and composition indicate that the mortar is composed of crushed granite. The composition will be compared to granite samples collected by Potter (2018) using thin section petrography to determine their origin. It is possible that the mortar is the by-product of shaping granite blocks for facing stones (as noted during experimental studies); however, they could be composed of different granite that was selected purposefully for aggregate due to properties that would make it more suitable for aggregate.

Mortar samples were recovered from both monumental and settlement architecture, and exported for petrographic analysis in 2019:

- SCRAP-2 (Block C2, ALA-002B, Op 9, Subop E, Lot 4, step riser mortar, Cat. #10465-MM013).

- SCRAP-3 (Monumental Core, Str 1/ 2, Op 6, Subop A, Lot 19, core face mortar, Cat. #10465-MM011).
- SCRAP-7 (Monumental Core, Str 10, Op 5, core face mortar, Cat. #10465-MM014).

Figure 6.26: SCRAP-3/Cat. #10465-MM011, mortar sample (left) and associated aggregate (right).

Plaza Surface

A terminal plaza surface sample (SCRAP-4/Cat. #10465-MM010) was recovered from East Plaza excavations at the base of Str 1/ 2 in the monumental core (see Chapter 2, this volume) and ranged in colour from 2.5Y 8/1 (white) to 2.5Y 8/2 (pale brown). The portions that can be removed as large pieces are very hard. The sample does not react to hydrochloric acid, indicating that it is not composed of limestone. The surface appears to be composed of very fine quartz sand, muscovite, biotite, and possible rock fragments in some kind of white matrix, possibly clay (Figure 6.28). The composition suggests that the raw materials are derived from a granite source location consistent with the area around Alabama. A piece of the plaza surface sample was fired by Ms. Aurora Saqui in her kitchen hearth in Maya Centre. The outside of the sample, which was in contact with direct flame and ash, turned a dark-grey (5YR 4/1) to yellowish-red (5YR 4/6) colour while the inside remained white (2.5Y 8/1) (Figure 6.27).

One surface sample was exported for petrographic analysis in 2019:

- SCRAP-4 (Monumental Core, Str 1/ 2, East Plaza, Op 6, Subop B, Lot 37, plaza surface, Cat. #10465-MM010).

Figure 6.27: Plaza surface sample (SCRAP-4/Cat. #10465-MM010), original sample (left) and fired sample (right).

Figure 6.28: Dino-Lite image of plaza surface sample (SCRAP-4/Cat. #10465-MM010) at 50x magnification (1.0mm scale).

Road Cut Sample: White sandy soil from Santa Rosa Village (Cat. #10465-MM009)

This sample was collected from an exposed road cut in the village of Santa Rosa (Figure 6.29) because it is a similar colour and composition to the material used to plaster the floors in the Alabama site core. The soil is moderately compact in situ and is covered by what appears to be dark lichen or other plant matter. The horizon is a loamy sand to sandy loam massive and peds are subangular blocky and range in size from medium to large. The peds are friable when moist and hard when dry. Portions of the horizon show red mottling in localized areas. The horizon contains about 60% gravel composed of subrounded to rounded, primarily equant with some elongated grains, composed of quartz with some muscovite, biotite, and possibly rock fragments (Figure 6.30). The fine fraction (>2mm) is of the same composition. The colour is 5Y 8/1 (white) when moist and N/9 (white) when dry. This soil can likely be assigned to the Puletan Soil Suite (King et al. 1989: 37-38; Wright et al. 1959: 94-101). The inclusions in the soil sample are much larger than the inclusions in the Alabama floor sample; however, the soils could have been processed to remove larger inclusions or a different location where inclusions are smaller may have been used.

Figure 6.29: Road cut in Santa Rosa Village

Figure 6.30: Road cut sample (left) and associated Dino-Lite image (right), from Santa Rosa Village (SCRAP-6/Cat. #10465-MM009).

Road Cut Sample: Sandy soil from Georgetown Village (Cat. #10465-MM012)

This sample was collected from an exposed road cut in the village of Georgetown because it is a similar colour and composition to the material used to plaster the floors in the Alabama site core. This soil sample was collected from the mottled subsoil (the bottom horizon in the photograph; Figure 6.31) and is different from the sample collected in Santa Rosa. This soil is a loamy sand and peds are subangular blocky and range in size from fine to coarse. The horizon is mottled throughout. The horizon contains about 20% gravel composed of subrounded to subangular quartz, primarily equant with some elongated grains, with some muscovite, biotite, and possibly rock fragments. The fine fraction (>2mm) is composed of angular to subangular quartz grains (equant, elongated, and occasional irregular grains) with some muscovite and biotite. The colour is 10YR 5/6 (yellowish brown) when moist and 5Y 7/1(light grey) when dry. This soil can likely be assigned to the Puletan Soil Suite (King et al. 1989: 37-38; Wright et al. 1959: 94-101). The inclusions in the soil sample are much larger than the inclusions in the Alabama floor sample; however, the soils could have been processed to remove larger inclusions or a different location where inclusions are smaller may have been used.

Figure 6.31: Road cut in Georgetown Village

Operation 8: Clay Survey

Ten clay samples were fashioned into briquettes and fired in Ms. Aurora Saqui's kitchen hearth in Maya Centre (Table 6.6). These samples will be analyzed using thin section petrography and compared to both the pottery and building materials described above. Preliminary analyses using a Dino-Lite suggests that the sandy clays recovered from drainages (SCRAP-11/Fired Clay Tile 1 and SCRAP-12/Fired Clay Tile 2) in the northwest portion of the Alabama settlement area (Figure 6.32) are the most similar to pottery, particularly Paste Ware 2. SCRAP-13/Fired Clay Tile 3, recovered from the stratigraphic Supob 9F placed in ALA-002 plaza (see Chapter 3, this volume), was collected to compare the composition of hypothesized flooding events to the samples recovered from active drainage locations. This plaza unit, excavated by Virginia Chiac, exhibited several discontinuous soil layers of differing textures (e.g., sand, sandy clay) suggestive of natural flooding events below the plaza surface and Late-Terminal Classic occupation horizon. The composition of the SCRAP-13 sample will be compared to the SCRAP-11 and SCRAP-12 samples to determine if the composition of the soil in Subop 9F is similar to the soils collected from active drainages in the Alabama settlement area. All three samples are sandy clay loams.

Two samples from the monumental core—Structure 14 construction core (SCRAP-20/Fired Clay Tile 10) and North Plaza construction core to the front of Str 10 (SCRAP-8)—and four samples from borrow pits around the monumental core (SCRAP-16/Fired Clay Tile 6, SCRAP-17/Fired Clay Tile 7, SCRAP-18/Fired Clay Tile 8, SCRAP-19/Fired Clay Tile 9) were also sampled to address questions of resource acquisition. A single sample (SCRAP-14/Fired Clay Tile 4) was collected from the foothills located to the north of the Alabama site core to determine if potters were using clays located above granite bedrock for pottery production. This sample was taken from a stratigraphic profile that was documented using standards for in-field soils analysis (Table 6.7 Part 1 & 2; Figure 6.33).

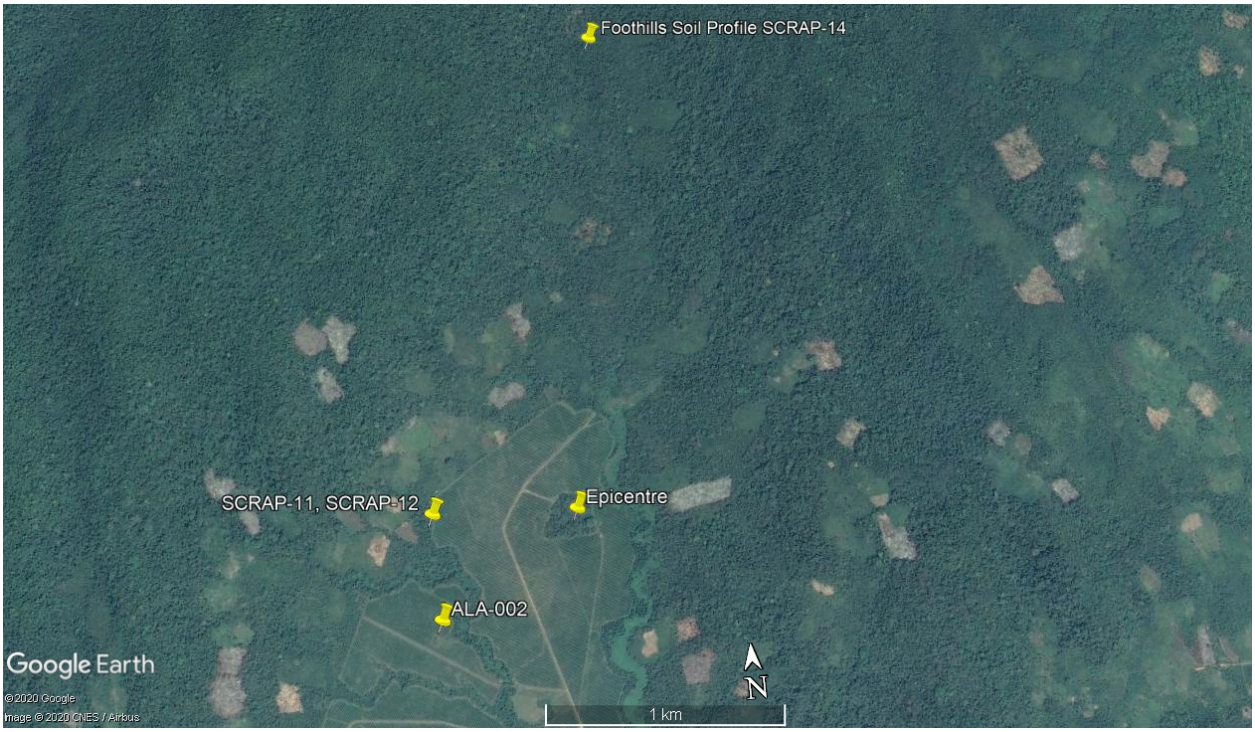

Figure 6.32: Location of clay samples from drainages (SCRAP-11, SCRAP-12), ALA-002 (SCRAP-13), and foothill soil profile (SCRAP-14).

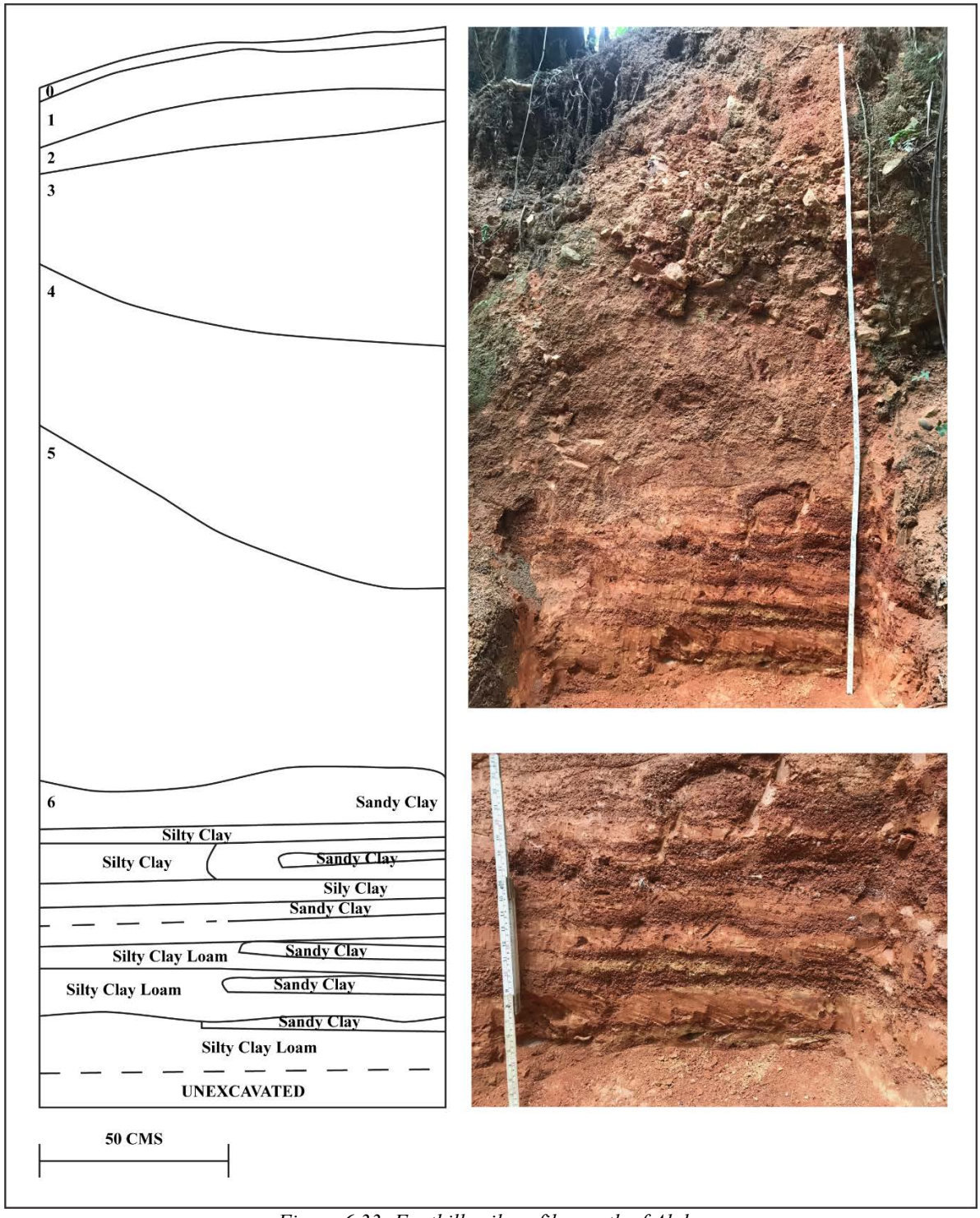

Figure 6.33: Foothill soil profile, north of Alabama.

Table 6.6: Descriptive data for clay samples.

Sample #	Location	Dry Munsell (Before Firing)	Moist Munsell (Before Firing)	Texture	% Pebbles	Munsell Dry Briquette	Munsell Fired Briquette
SCRAP-11	Drainage	No Data	7.5YR-4/4	Sandy clay loam		7.5YR-6/4 (Minor Cracking)	2.5YR-5/8
SCRAP-12	Drainage	No Data	5YR-5/6	Sandy clay loam		7.5YR-7/4 (Minor Cracking)	5Y-7/2; 5YR-7/4 on exterior
SCRAP-13	ALA-002 (Unit 9F, Plaza, IV on map)	No Data	No Data	Sandy clay loam		10YR-7/4 (Minor Cracking and Flaking)	5YR-4/6
SCRAP-14	Foothills	2.5YR-4/8	10YR-5/8	Silty clay	0		5YR-4/6
SCRAP-8	Red Plaza Fill (Str 10)	2.5YR-5/6	2.5YR-4/6	Sandy clay loam	10	5YR-5/6 (Minor Cracking)	5YR-6/6 (Minor Cracking)
SCRAP-16	Borrow Pit B3 (20-30cmbs)	5YR-4/4	2.5YR-3/4	Sandy clay loam	10	5YR-5/4 (No Cracking)	2.5YR-5/8 (Minor Cracking)
SCRAP-17	Borrow Pit B3 (80-90cmbs)	2.5YR-4/6	2.5YR-4/8	Sandy clay loam	10	5YR-5/6 (No Cracking)	2.5YR-5/8 (Minor Crumbling)
SCRAP-18	Borrow Pit B6 (50-60cmbs)	2.5YR-5/6	2.5YR-5/6	Sandy clay loam	5	5YR-7/4 (No Cracking)	10YR-7/1; 2.5YR-5/8 on exterior
SCRAP-19	Borrow Pit B6 (99-100cmbs)	Mottled (10YR-7/3, 2.5YR-5/6)	Mottled (10YR-7/2, 2.5YR-4/6	Sandy clay loam	0	7.5YR-8/3 (Cracking and Flaking)	8/5Y-8/1; 5YR-7/4
SCRAP-20	Str 14 Fill	5YR-5/4	5YR-4/4	Sandy clay loam	20	5YR-6/4 (Some Crumbling)	10YR-7/1; 5YR-7/4 on exterior

Table 6.7 Part 1: Soil profile data for foothills north of Alabama.

Horizon Number		Depth	Dry Munsell	Moist Munsell	Percent Gravel	Structure	Ped Size	Ped Grade	Dry Consistence	Moist Consistence	Stickiness	Plasticity	Texture
0	O	2-0	7.5YR 5/4	7.5YR 3/3	15	Subangular Blocky	Fine to Medium	Weak	Slightly Hard				Sandy Loam
1	A	0-14	7.5YR 5/4	7.5YR 4/3	50	Subangular Blocky	Fine to Medium	Weak	Slightly Hard	Very Friable	Not Sticky	Slightly Plastic	Sandy Loam
2	E	14-25	7.5YR 6/6; 7.5YR 6/4	7.5YR 4/4	20	Subangular Blocky	Fine to Medium		Slightly Hard	Friable	Slightly Sticky	Slightly Plastic	Silty Loam
3	Bx	25-80	2.5YR 6/5	2.5YR 6/5	20	Subangular Blocky	Medium	Massive	Hard	Friable	Slightly Sticky	Plastic	Silty Clay Loam
4	C		2.5YR 5/6	2.5YR 4/8	60	Subangular Blocky	Medium	Massive	Hard				Loamy Sand
5	Bx		10YR 5/6	10YR 4/8	40	Subangular Blocky	Medium		Hard	Friable	Slightly Sticky	Slightly Plastic	Sandy Clay Loam
6	Cu												
	a		2.5YR 7/6	5YR 5/6	0	Weakly Coherent	Very Fine	Massive	Slightly Hard	Very Friable	Sticky	Plastic	Silty Clay Loam
	b		2.5YR 4/8	10YR 5/8	0	Granular	Very Fine	Massive	Slightly Hard	Firm	Sticky	Very Plastic	Silty Clay
	c		10YR 4/6	10YR 4/6	40	Subangular Blocky	Fine to Medium	Massive	Firm	Firm	Slightly Sticky	Slightly Plastic	Sandy Clay

Table 6.7 Part 2: Soil profile data for foothills north of Alabama.

Horizon Number		Depth	Clay Film	Lower Boundary Distinctness	Lower Boundary Topography	Sorting	Soil Angularity	Gravel Angularity	Notes
0	O	2-0	None	Gradual	Straight	Poor			
1	A	0-14	None	Gradual	Wavy	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Small roots and organic matter throughout the horizon, mica
2	E	14-25	None	Gradual	Wavy	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Micaceous, this horizon appears leached suggesting an E but not a lot of leaching. Perhaps an AE horizon.
3	Bx	25-80	None	Abrupt	Irregular	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Micaceous, this horizon is located just above the intrusive channelized quartzite feature, has less gravel than the below layers suggesting this horizon represents channel fill and the soil that formed above it.
4			None	Abrupt	Irregular	Very Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Channel Fill, Abundant Angular to Subrounded Quartzite pebbles (~10 to 20cm)
	C								Channel
5	Bx		None	Abrupt	Straight	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Fragipan with clay coatings, much more mica in this horizon than the above, abrupt boundary to the lower layered horizon
6	Cu								
	a		None	Abrupt	Straight	Well			Micaceous silty clay loam; present as round to irregular lumps within clay layers and also as distinct, non-continuous layers
	b		None	Abrupt	Straight	Well			Micaceous silty loam; present as distinct continuous and non-continuous layers; often contains silty clay loam within the distinct layers
	c		None	Abrupt	Straight	Poor	Subangular to subrounded quartz and other minerals	Subangular to subrounded quartz and other minerals	Micaceous sandy clay: present as layers that are distinct and continuous as well as non-continuous. The composition of this layer differs from above indurated sandy layer (Horizon 5) and contains a dark red mineral (feldspar? metamorphic?) in addition to quartz.

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Appendix A. Bulk Artifact Counts for Ops 5, 6, 7, 9 (small finds not included)

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
5	A	12	0	0.0	0	0.0	1	0.7	0	0.0	0	0.0	0	0.0
5	A	13	0	0.0	3	8.7	0	0.0	0	0.0	0	0.0	0	0.0
5	A	14	0	0.0	1	8.7	0	0.0	0	0.0	0	0.0	0	0.0
5	A	15	3	9.3	3	8.2	0	0.0	0	0.0	0	0.0	0	0.0
5	B	24	1	4.6	16	57.1	0	0.0	1	8.8	0	0.0	0	0.0
5	B	25	1	1.0	10	8.4	0	0.0	0	0.0	0	0.0	0	0.0
5	B	26	2	8.3	2	4.6	0	0.0	0	0.0	0	0.0	0	0.0
5	B	27	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	B	28	0	0.0	10	58.4	4	53.3	0	0.0	1.0	6.1	0	0.0
5	B	29	0	0.0	2	9.5	0	0.0	0	0.0	0	0.0	0	0.0
5	B	30	0	0.0	3	7.3	0	0.0	0	0.0	0	0.0	0	0.0
5	B	31	1	15.0	8	37.8	5	76.1	0	0.0	0	0.0	0	0.0
5	B	32	0	0.0	0	0.0	3	85.6	0	0.0	0	0.0	0	0.0
5	B	33	2	20.9	3	15.4	0	0.0	0	0.0	0	0.0	0	0.0
5	B	34	0	0.0	0	0.0	2	3.5	0	0.0	0	0.0	2	182.0
5	B	35	0	0.0	0	0.0	2	6.3	0	0.0	0	0.0	0	0.0
5	B	36	2	5.9	3	4.4	0	0.0	0	0.0	0	0.0	0	0.0
5	B	37	0	0.0	13	20.0	4	22.8	0	0.0	0	0.0	0	0.0
5	B	38	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	B	39	0	0.0	8	40.6	4	12.2	1	8.8	0.0	0.0	0	0.0
5	B	40	0	0.0	1	11.7	2	4.3	0	0.0	0	0.0	0	0.0
5	B	41	0	0.0	1	2.2	1	1.4	0	0.0	0	0.0	0	0.0
5	B	42	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5	B	43	0.0	0.0	5	13.5	5	20.6	0	0.0	0	0.0	0	0.0
5	B	44	0	0.0	15	33.6	0	0.0	0	0.0	0	0.0	0	0.0
5	B	45	0	0.0	12	71.5	0	0.0	0	0.0	0	0.0	0	0.0
5	B	46	0	0.0	18	48.1	4	14.7	0	0.0	0	0.0	0	0.0
5	B	47	0	0.0	7	14.1	0	0.0	0	0.0	0	0.0	0	0.0
5	B	48	0	0.0	9	62.1	0	0.0	0	0.0	0	0.0	0	0.0
5	B	49	0	0.0	13	42.5	0	0.0	0	0.0	0	0.0	0	0.0
5	B	50	0	0.0	20	75.7	0	0.0	0	0.0	0	0.0	0	0.0
5	B	51	4	28.4	27	108.2	2	10.3	0	0.0	0	0.0	0	0.0

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
5	B	52	0	0.0	5	10.0	1	0.7	0	0.0	0	0.0	0	0.0
5	B	53	0	0.0	2	17.6	1	1.3	0	0.0	0	0.0	0	0.0
			16	**93.4**	**220**	**799.9**	**41**	**313.8**	**2**	**17.6**	**1**	**6.1**	**2**	**182.0**
6	cleaning		0	0.0	6	9.6	0	0.0	0	0.0	4	22.8		
6	A	13	0	0.0	7	9.7	3	4.0	0	0.0	0	0.0	0	0.0
6	A	14	0	0.0	2	14.5	3	2.1	0	0.0	0	0.0	0	0.0
6	A	15	0	0.0	3	3.5	2	3.4	0	0.0	1	28.6	0	0.0
6	A	16	1	4.0	10	29.1	2	2.6	8	18.7	40	134.5	0	0.0
6	A	17	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	A	18	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	A	19	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	A	20	0	0.0	15	46.8	0	0.0	2	1.2	1	4.4	0	0.0
6	A	21	0	0.0	4	12.1	0	0.0	0	0.0	3	55.7	0	0.0
6	A	22	0	0.0	10	13.7	0	0.0	0	0.0	10	57.3	0	0.0
6	A	23	0	0.0	7	17.3	0	0.0	0	0.0	4	22.4	0	0.0
6	A	24	1	11.0	47	164.7	0	0.0	3	34.8	2	11.6	0	0.0
6	A	25	0	0.0	0	0.0	1	15.3	0	0.0	0	0.0	0	0.0
6	A	26	0	0.0	0	0.0	3	32.1	0	0.0	12	110.0	0	0.0
6	B	17	1	8.1	33	75.9	13	122.8	13	37.1	68	461.0	0	0.0
6	B	18	4	23.8	12	18.7	4	22.7	1	1.7	5	24.0	0	0.0
6	B	19	0	0.0	9	16.4	1	0.1	0	0.0	2	14.9	0	0.0
6	B	20	3	42.1	6	11.3	1	4.2	3	23.8	1	5.0	0	0.0
6	B	21	0	0.0	7	32.2	0	0.0	3	21.0	1	2.8	0	0.0
6	B	22	0	0.0	18	67.9	0	0.0	0	0.0	10	39.4	0	0.0
6	B	23	0	0.0	26	58.5	1	1.8	5	10.9	77	233.9	0	0.0
6	B	24	0	0.0	8	21.0	0	0.0	0	0.0	38	167.2	0	0.0
6	B	25	0	0.0	0	0.0	0	0.0					0	0.0
6	B	26	0	0.0	7	17.0	0	0.0	0	0.0	19	60.0	0	0.0
6	B	27	6	106.9	36	121.5	0	0.0	0	0.0	27	79.7	0	0.0
6	B	28	3	13.9	38	79.6	0	0.0	7	36.2	13	87.9	0	0.0
6	B	29	1	8.4	10	18.2	0	0.0	1	6.3	4	26.2	0	0.0
6	B	30	0	0.0	5	8.7	0	0.0	0	0.0	0	0.0	0	0.0
6	B	31	0	0.0	0	0.0	5	18.1	0	0.0	0	0.0	0	0.0
6	B	32	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
6	B	33	0	0.0	4	4.9	0	0.0	0	0.0	0	0.0	0	0.0
6	B	34	0	0.0	5	16.1	0	0.0	0	0.0	1	8.2	0	0.0
6	B	35	3	18.8	22	51.3	1	1.0	2	3.3	4	33.5	0	0.0
6	B	36	0	0.0	14	28.6	1	1.9	1	4.2	0	0.0	0	0.0
6	B	37	0	0.0	5	12.0	0	0.0	0	0.0	0	0.0	0	0.0
6	B	38	0	0.0	15	56.3	0	0.0	2	7.1	0	0.0	0	0.0
6	B	39	0	0.0	4	16.2	0	0.0	7	31.7	0	0.0	0	0.0
6	B	40	0	0.0	18	14.0	1	3.1	1	3.5	0	0.0	0	0.0
6	B	41	6	39.5	52	184.0	0	0.0	3	13.3	0	0.0	0	0.0
6	B	42	0	0.0	29	41.9	3	7.5	0	0.0	0	0.0	0	0.0
6	B	mix	0	0.0	5	10.8	0	0.0	0	0.0	2	14.4	0	0.0
6	C	4	0	0.0	6	17.8	0	0.0	1	11.7	6	31.9	0	0.0
6	C	5	0	0.0	2	5.1	0	0.0	0	0.0	4	28.0	0	0.0
6	C	6	0	0.0	1	4.9	0	0.0	0	0.0	0	0.0	0	0.0
6	C	7	0	0.0	6	33.5	1	0.5	3	26.1	0	0.0	0	0.0
6	C	8	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0	0	0.0
6	C	9	0	0.0	4	5.5	0	0.0	0	0.0	1	2.6	0	0.0
6	C	10	0	0.0	11	29.8	2	5.9	3	21.1	7	35.6	0	0.0
6	C	11	0	0.0	12	22.0	0	0.0	4	21.0	0	0.0	0	0.0
6	D	1	0	0.0	8	21.7	2	1.4	1	228.4	0	0.0	0	0.0
6	D	2	1	33.3	4	8.7	0	0.0	0	0.0	1	8.0	0	0.0
6	D	3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	D	4	3	15.6	7	31.9	0	0.0	0	0.0	0	0.0	0	0.0
6	D	5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	D	6	0	0.0	3	6.6	0	0.0	0	0.0	7	27.4	0	0.0
6	B/C	1	1	32.3	0	0.0	0	0.0	1	3.3	0	0.0	0	0.0
6	B/C	2	0	0.0	15	43.1	0	0.0	0	0.0	6	40.9	0	0.0
6	B/C	3	1	4.6	20	42.0	0	0.0	4	25.7	5	31.4	0	0.0
6	B/C	4	4	36.7	34	79.5	0	0.0	6	49.3	24	141.5	0	0.0
6	B/C	5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6	B/C	6	1	2.7	12	25.4	3	3.6	0	0.0	7	19.5	0	0.0
6	B/C	7	4	42.7	15	100.5	9	83.2	0	0.0	6	48.5	0	0.0
6	B/C	8	13	88.8	2	8.9	0	0.0	3	18.3	2	3.7	0	0.0
6	B/C	9	9	48.4	44	67.8	8	55.5	1	106.8	28	135.2	0	0.0

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
			66	**581.6**	**706**	**1860.1**	**70**	**392.8**	**89**	**766.5**	**453**	**2259.6**	**0**	**0.0**
7	B	1	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0
			0	**0.0**	**1**	**1.6**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
9	A	1	7	41.7	57	148.5	16	57.8	1	4.0	0	0.0	0	0.0
9	A	2	1	10.0	38	121.5	0	0.0	3	11.0	0	0.0	0	0.0
9	A	3	0	0.0	21	83.5	3	13.0	2	10.5	0	0.0	0	0.0
9	A	4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	A	5	3	30.6	60	202.5	1	8.7	0	0.0	0	0.0	0	0.0
9	A	6	14	34.8	109	316.7	9	32.0	1	18.8	0	0.0	0	0.0
9	A	7	8	83.0	71	176.7	2	22.0	4	38.1	0	0.0	0	0.0
9	A	8	0	0.0	32	80.3	0	0.0	1	6.4	0	0.0	0	0.0
9	A	9	0	0.0	34	68.9	2	1.0	3	15.3	0	0.0	0	0.0
9	A	10	6	59.0	116	311.6	14	53.2	0	0.0	0	0.0	0	0.0
9	A	11	2	14.5	21	35.7	0	0.0	0	0.0	0	0.0	0	0.0
9	A	12	0	0.0	2	5.1	0	0.0	1	31.7	0	0.0	0	0.0
9	A	13	0	0.0	9	18.5	1	17.0	0	0.0	0	0.0	0	0.0
9	A	14	4	20.8	40	43.3	17	20.2	1	2.4	0	0.0	0	0.0
9	A	15	1	4.2	8	34.1	0	0.0	0	0.0	0	0.0	0	0.0
9	A	16	1	16.6	3	12.1	0	0.0	0	0.0	0	0.0	0	0.0
9	A	17	1	5.7	1	10.2	0	0.0	0	0.0	0	0.0	0	0.0
9	A	18	1	4.6	12	25.6	0	0.0	0	0.0	0	0.0	0	0.0
9	A	19	2	17.2	100	229.8	10	32.6	4	30.4	0	0.0	0	0.0
9	A	20	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	A	21	1	36.0	0	0.0	2	28.9	0	0.0	0	0.0	0	0.0
9	A	22	1	39.8	1	8.5	0	0.0	0	0.0	0	0.0	0	0.0
9	A	23	0	0.0	5	14.0	0	0.0	1	4.4	0	0.0	0	0.0
9	D	1	5	36.7	63	212.9	3	11.4	6	54.2	0	0.0	0	0.0
9	D	2	38	185.0	2	12.7	1	1.8	0	0.0	0	0.0	0	0.0
9	D	3	2	16.5	8	12.0	0	0.0	0	0.0	0	0.0	0	0.0
9	D	4	0	0.0	84	193.4	4	17.9	2	9.1	0	0.0	0	0.0
9	D	5	0	0.0	13	63.9	0	0.0	0	0.0	0	0.0	0	0.0
9	D	6	1	9.4	17	38.2	1	0.5	1	3.7	0	0.0	0	0.0
9	D	7	0	0.0	21	28.1	0	0.0	0	0.0	0	0.0	0	0.0
9	D	8	1	5.7	6	13.8	1	0.5	0	0.0	0	0.0	0	0.0

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
9	D	9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	A/D	1	3	19.2	44	144.8	3	3.4	0	0.0	0	0.0	0	0.0
			103	**691.0**	**998**	**2666.9**	**90**	**321.9**	**31**	**240.0**	**0**	**0.0**	**0**	**0.0**
9	B	1	0	0.0	4	14.3	0	0.0	0	0.0	0	0.0	0	0.0
9	B	2	0	0.0	6	8.0	2	7.1	0	0.0	0	0.0	0	0.0
9	B	3	0	0.0	13	49.4	0	0.0	0	0.0	0	0.0	0	0.0
9	B	4	0	0.0	2	8.1	0	0.0	0	0.0	0	0.0	0	0.0
9	B	5	0	0.0	9	73.6	1	1.9	0	0.0	0	0.0	0	0.0
9	B	6	0	0.0	3	28.3	0	0.0	0	0.0	0	0.0	0	0.0
9	B	7	0	0.0	4	28.0	0	0.0	0	0.0	0	0.0	0	0.0
9	B	8	4	35.9	4	17.6	1	1.2	0	0.0	0	0.0	0	0.0
9	B	9	2	22.0	68	114.3	1	0.5	0	0.0	0	0.0	0	0.0
9	B	10	1	7.0	26	44.0	6	4.1	0	0.0	0	0.0	0	0.0
9	B	11	0	0.0	4	17.3	0	0.0	0	0.0	0	0.0	0	0.0
9	C	1	0	0.0	4	11.4	0	0.0	0	0.0	0	0.0	0	0.0
9	C	1 ext	2	24.4	9	24.3	0	0.0	0	0.0	0	0.0	0	0.0
9	C	2	0	0.0	5	15.1	0	0.0	0	0.0	0	0.0	0	0.0
9	C	2 ext	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0
9	C	3	0	0.0	19	53.2	3	1.5	0	0.0	0	0.0	0	0.0
9	C	4	0	0.0	64	227.8	0	0.0	0	0.0	0	0.0	0	0.0
9	C	5	0	0.0	5	18.6	0	0.0	0	0.0	0	0.0	0	0.0
9	C	6	1	117.0	14	80.2	6	13.3	0	0.0	0	0.0	0	0.0
9	C	7	2	10.3	15	34.7	0	0.0	0	0.0	0	0.0	0	0.0
9	C	8	1	4.5	4	15.9	1	6.3	0	0.0	0	0.0	0	0.0
9	C	9	0	0.0	6	15.6	3	1.4	0	0.0	0	0.0	0	0.0
9	C	10	0	0.0	1	19.0	0	0.0	0	0.0	0	0.0	0	0.0
9	C	11	0	0.0	20	69.0	1	1.0	0	0.0	0	0.0	0	0.0
			13	**221.1**	**310**	**989.3**	**25**	**38.3**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
9	E	0	1	13.1	8	114.1	1	6.0	0	0.0	0	0.0	0	0.0
9	E	1	69	550.0	397	1840.0	28	159.2	32	390.0	32	410.0	0	0.0
9	E	2	46	487.0	378	1240.0	21	51.4	11	53.0	63	720.0	0	0.0
9	E	2a	6	106.0	44	230.0	0	0.0	3	28.6	1	15.0	0	0.0
9	E	2b	3	22.3	37	200.0	0	0.0	3	7.4	2	12.9	0	0.0
9	E	3	1	4.1	7	30.2	0	0.0	0	0.0	0	0.0	0	0.0

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
9	E	4	3	22.4	24	78.1	6	19.9	0	0.0	0	0.0	0	0.0
9	E	4b	2	39.2	15	70.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E	5	1	20.5	8	46.5	1	5.0	0	0.0	0	0.0	0	0.0
9	E	6	1	20.2	8	45.6	0	0.0	0	0.0	0	0.0	0	0.0
9	E	7	0	0.0	11	47.1	0	0.0	0	0.0	0	0.0	0	0.0
9	E	8	1	24.1	4	11.3	0	0.0	0	0.0	0	0.0	0	0.0
9	E	9	2	30.4	7	74.5	0	0.0	1	6.9	0	0.0	0	0.0
9	E	10	0	0.0	7	45.3	0	0.0	1	22.2	0	0.0	0	0.0
9	E	11	3	22.8	70	320.0	4	35.4	0	0.0	0	0.0	0	0.0
9	E	12	0	0.0	7	37.8	0	0.0	0	0.0	0	0.0	0	0.0
9	E	13	1	3.0	23	78.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E	14	1	2.9	10	29.1	3	5.2	0	0.0	0	0.0	0	0.0
9	E	15	0	0.0	0	0.0	0	0.0	2	9.9	0	0.0	0	0.0
9	E	16	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E	17	0	0.0	8	16.3	0	0.0	0	0.0	0	0.0	0	0.0
9	E	18	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E	19	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E	20	14	230.0	133	470.0	1	2.2	0	0.0	0	0.0	0	0.0
9	E	21	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E	22	10	80.0	138	480.0	0	0.0	0	0.0	0	0.0	0	0.0
9	G	1	17	180.0	81	370.0	2	2.0	4	59.3	9	60.8	0	0.0
9	G	2	7	120.0	81	470.0	0	0.0	27	327.0	3	43.0	0	0.0
9	G	3	0	0.0	11	100.1	3	26.4	2	5.9	2	21.6	0	0.0
9	G	4	0	0.0	2	7.4	1	1.9	2	9.2	0	0.0	0	0.0
9	G	5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	G	6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	G	7	2	33.0	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0
9	G	8	0	0.0	19	57.5	0	0.0	0	0.0	0	0.0	0	0.0
9	G	9	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	G	10	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	G	11	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	G	12	0	0.0	4	10.9	0	0.0	0	0.0	0	0.0	0	0.0
9	G	13	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	E/G	1	5	18.3	35	180.0	2	45.8	24	400.0	0	0.0	0	0.0

Operation	Suboperation	Lot	Ceramic bulk				Lithic bulk		Daub bulk				Other bulk	
			Diagnostic #	Diagnostic Weight (0.0g)	Non-Diagnostic #	Non-Diagnostic Weight (0.0g)	Lithic #	Lithic Weight (0.0g)	Regular #	Regular Weight (0.0g)	Resurfacing? #	Resurfacing Weight (0.0g)	Other #	Other Weight (0.0g)
9	E/G	2	1	16.7	10	62.2	0	0.0	0	0.0	0	0.0	0	0.0
9	E/G	3	2	7.0	8	62.6	0	0.0	0	0.0	0	0.0	0	0.0
			200	**2059.9**	**1596**	**6826.4**	**73**	**360.4**	**112**	**1319.4**	**112**	**1283.3**	**0**	**0.0**
9	F	1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9	F	2	2	59.9	4	14.9	0	0.0	0	0.0	0	0.0	0	0.0
9	F	3	0	0.0	5	16.6	0	0.0	0	0.0	0	0.0	0	0.0
9	F	4	2	27.3	32	131.1	0	0.0	0	0.0	0	0.0	0	0.0
9	F	5	0	0.0	0	0.0	0	0.0	1	3.9	0	0.0	0	0.0
9	F	9	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
			5	**87.2**	**41**	**162.6**	**0**	**0.0**	**1**	**3.9**	**0**	**0.0**	**0**	**0.0**

Appendix B. SCRAP Classification Guides & Recording Sheets

SCRAP investigations follow a number of existing classification schemes as closely as possible when appropriate.

Matrix Colour Descriptions: Munsell Soil Colour Chart

Architecture: Loten, S., and D. Pendergast (1984). *A Lexicon of Maya Architecture*. Royal Ontario Museum, Toronto, ON.

Burials: Welsh, W.B.M. (1988). *An Analysis of Classic Lowland Maya Burials*. BAR International Series 409. British Archaeological Reports, Oxford.

Settlement Site Types: Ashmore, W., S.V. Connell, J.J. Ehret, C.H. Gifford, T. Neff, and J.C. VandenBosch (1994). The Xunantunich Settlement Survey. In *Xunantunich Archaeological Project, 1994 Field Report,* edited by R.M. Leventhal and W. Ashmore, pp. 248-289. Report submitted to the Belize Institute of Archaeology, Belmopan.

Other Materials:
Additionally, we have many of our own recording forms and additional classification guides, which were adopted or developed based on a number of sources and inspired by many other research projects (see below). Not included in this appendix are our basic artifact analysis protocols.

Temporal Designations (working version)

Postclassic Period	**(PC)**	**ca. AD 900 to 1525**
Late Postclassic	(LPC)	ca. AD 1200 to 1525
Early Postclassic	(EPC)	ca. AD 900 to 1200
Classic Period	**(CP)**	**ca. AD 250 to 900**
Terminal Classic	(TC or LCIII)	ca. AD 800 to 900
Late Classic	(LC)	ca. AD 600 to 800
Late facet	*(LCI)*	*ca. AD 700 to 800*
Early facet	*(LCII)*	*ca. AD 600 to 700*
Early Classic	(EC)	ca. AD 250 to 600
Formative Period	**(FP)**	**ca. 1200 BC to AD 250**

Common Context Designations (adjusted as required)

Context Types	**Deposit Type**	**Lot Type**
Humus	Primary	Natural
Ploughzone	Secondary	Cultural
Colluvium/Fluvium	De Facto	Arbitrary
Fall		
Slump		
Habitation Debris		
On Floor Material		
Floor or Pavement Cap/Surface (specify)		
Floor or Pavement Ballast (specify)		
Construction Core (specify)		
Occupation Horizon		
Horizon (qualify or number/letter)		
Bedrock (clarify with directors before use)		

Matrix Inclusion Designations

	Diameter (mm)
boulders	>300
cobbles	75-300
coarse gravel (lg pebbles)	75-19
fine gravel (sm pebbles)	19-4.8
coarse sand	4.8-2.0
medium sand	2.0-0.43
fine sand	0.43-0.08
fine silt & clay	<0.08

Settlement Survey Form

Stann Creek Regional Archaeology Project **SETTLEMENT SURVEY FORM**

Date: _____/____/____ Recorder: _____
YYYY / MM / DD

Archaeo. Site: _____ Accession # _____

1. Settlement site designation: ALA-_____ (3-digit number) or _____
2. Property Block: _____ (see property map).
3. Classify using classification below: _____
4. Identify the feature: mound _____ artefact scatter _____ borrow pit _____

   other (describe) _____
5. Photograph number(s): _____
6. Record a GPS (WGS84) point (note location, ideally at the centre/datum of each feature):

   Device # _____ Point # _____ Location description: _____

   UTM Quadrant ____ Easting __ __ __ __ __ __ __ / Northing __ __ __ __ __ __ __
7. Surface collection (label bags with ss designation number)? Yes __ No __

   If yes, describe contents: _____
8. Provide a more complete description of the site (e.g. area, height, material, associated mounds, etc.) on the back of this form and in your notebook
9. If mound is greater than 0.5m high, draw a tape-and-compass map on the back of this form (noting location of GPS point). Label map with ss designation number.

Settlement Survey Unit Classification (modified from Ashmore et al. 1994)

Type	Description
0	Non-mounded feature (e.g. scatters, borrow pits, quarries/sources, water management features).
I	Isolated mound less than 2m high.
II	2-4 mounds, informally arranged, all less than 2m high.
III	2-4 mounds, orthogonally arranged, all less than 2m high.
IV	5 or more mounds, informally arranged, all less than 2m high.
V	5 or more mounds, at least 2 arranged orthogonally, all less than 2m high.
VI	1 or more mounds, at least 1 being 2-5m high.
VII	1 or more mounds, at least 1 being higher than 5m.

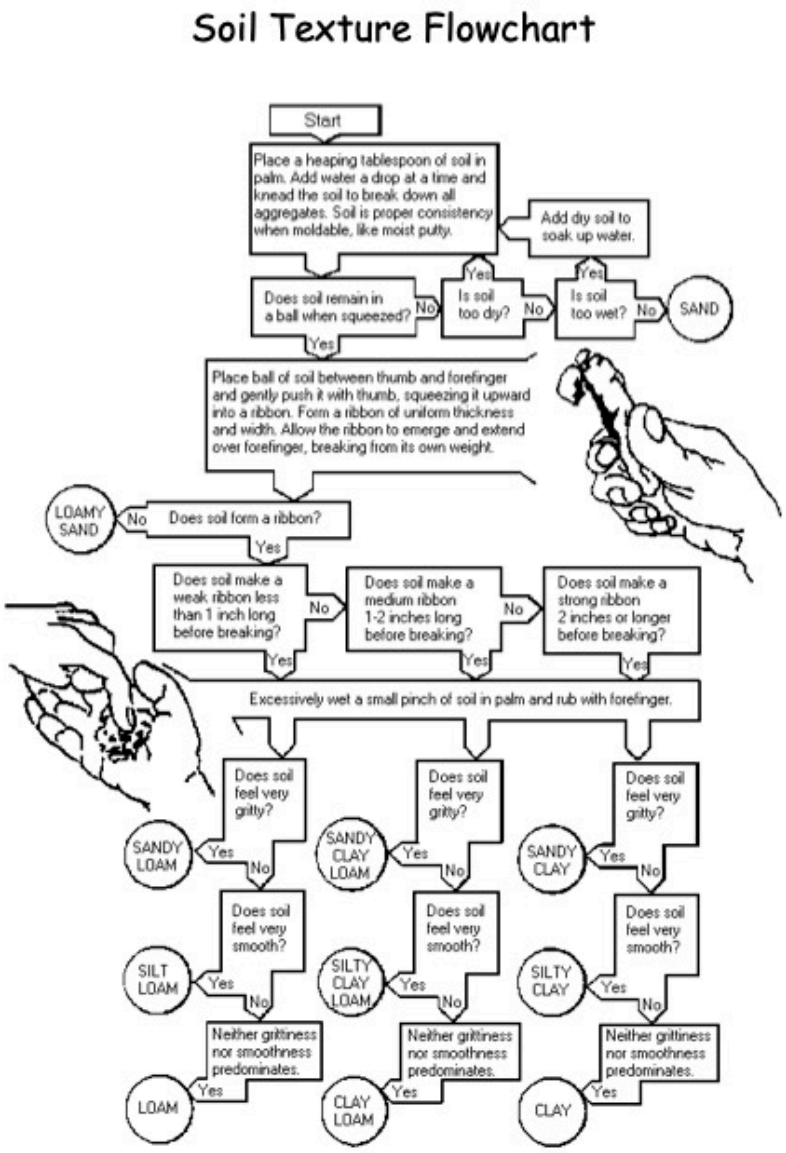
Excavation Lot Form

Stann Creek Regional Archaeology Project **LOT FORM**

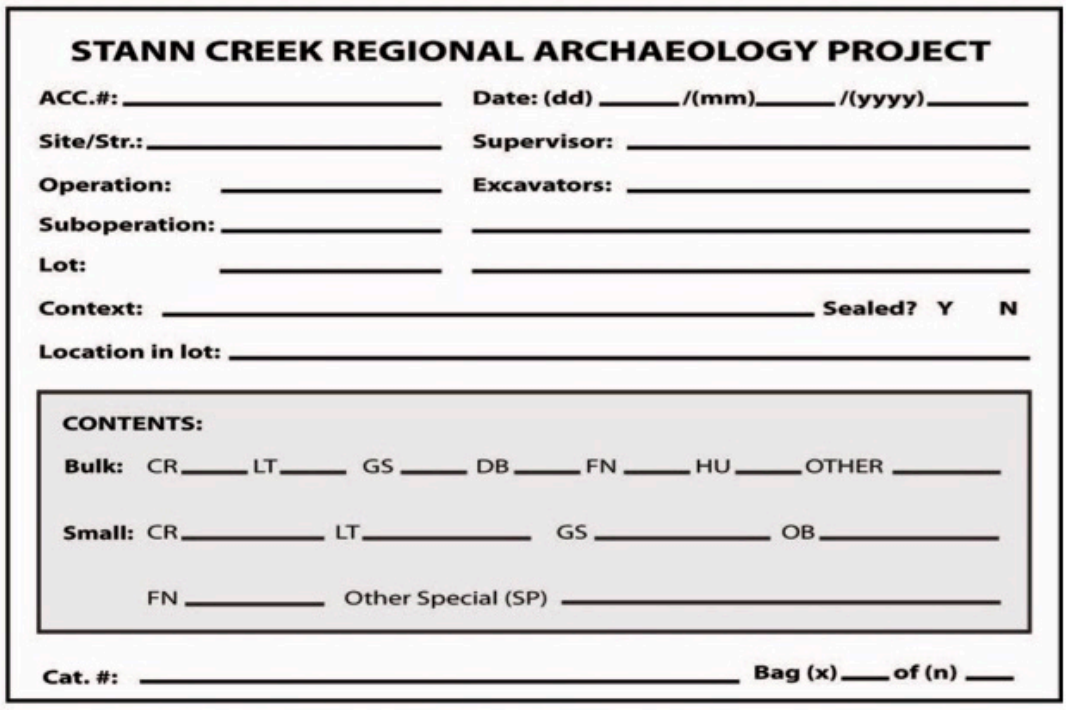
Acc#	Site/Str.:		Date:
Op:	Investigators		
Subop:	Dimensions (m): ___N/S x ___E/W	Break: Arbitrary ___ Cultural ___ Natural ___	
Lot:	Orientation (degrees):	Location in Subop:	
Context:		Associated Lots:	
Physically Above:		Physically Below:	
Goals:			

LOT DEPTHS (centimeters)		**SKETCH OF BASE OF LOT** (incl. scale, north arrow)
Datum name:		
Datum elevation:		
Corner	*Top*	*Bottom*
NW		
NE		
SE		
SW		
Centre		
MATRIX DESCRIPTION		
Colour (Munsell):		
Texture:		
Inclusions:		**ADDITIONAL COMMENTS** (use back of form if required)
MATERIALS (estimate numbers) Ceramic: Lithic: Groundstone: Faunal: Other:		**RECORDS**: photos ___ top plan ___ profiles ___ other ___ Photo numbers: Drawing numbers:
SAMPLES (types and numbers)		Other numbers:

Soil Texture Flow Chart



Artifact Card & Artifact Classification Guide



STANN CREEK REGIONAL ARCHAEOLOGY PROJECT

ACC.#: _____ **Date: (dd)** _____ **/(mm)** _____ **/(yyyy)** _____

Site/Str.: _____ **Supervisor:** _____

Operation: _____ **Excavators:** _____

Suboperation: _____ _____

Lot: _____ _____

Context: _____ **Sealed? Y N**

Location in lot: _____

CONTENTS:

Bulk: CR____ LT____ GS____ DB____ FN____ HU____ OTHER____

Small: CR____ LT____ GS____ OB____

FN____ Other Special (SP)____

Cat. #: _____ **Bag (x)**____ **of (n)**____

SCRAP Artifact Classification Guide
(add new types where necessary)

Cat.	code	ARTEFACT TYPE	Cat.	code	ARTEFACT TYPE	Cat.	code	ARTEFACT TYPE	Cat.	code	ARTEFACT TYPE
Ceramic	CS	bulk lot	Lithic	LT	bulk lot	Ground stone	GS	bulk lot	Faunal	FN	bulk lot
		bead			awl			adorno			pendant
		cylinder seal			adorno			adze			adorno
		ear ornament			blade			anchor			awl
		figurine			burin			barkbeater			bead
		figurine whistle			chopper			baton			cut piece
		flat stamp			crystal (quartz)			bead			drilled piece
		glyph-iconography			drill			celt			fishhook
		ladle censer			eccentric			doughnut stone			incised piece
		mask			graver/scraper			ear ornament			pin
		musical instrument			hammerstone			grooved sphere			punch
		net weight (butterfly)			knife			incised stone			spatula
		pendant			macroblade			mano (fragment)			spindle whorl
		perforated potsherd			notched flake			mano (preform)			stingray spine
		potsherd disk (perfor.)			perforator			mano (whole)			tinkler
		spindle whorl			pounding stone			metate (fragment)			unclassified
		unclassified			projectile point			metate (preform)			worked piece
		potsherd disk (unperf.)			scraper			metate (whole)	Obsidian	OB	NO bulk lots
		vessel			thick biface			mirror			blade
		vessel (partial)			thin biface			mortar			blade core (fragment)
		worked potsherd			unclassified			mosaic piece			blade core (whole)
Historic	HT	glass			utilized flake			painted slate			core (fragment)
		coins	Daub	DB	bulk lot			patolli board			core (whole)
		composite			special			pendant			eccentric
		faunal			corner piece			perforated facing stone			flake
		human			painted			pestle			projectile point
		metal			unclassified			portable sculpture			shatter
		plastic	Human	HU	bulk lot			pounding stone			thin biface
		pottery			carved piece			ring-stone			
Special Finds	SP	raw hematite			inlayed teeth			rubbing stone			
		raw jadeite			painted piece			spindle whorl			
		speleothem			unclassified			unclassified			
								wrench			

Sample (carbon, soil, etc.) Record Form

Stann Creek Regional Archaeology Project **SAMPLE RECORD FORM**

THE BASICS:

Site/Structure: _____ Date: _____

Operation: _____ Accession #: _____

Suboperation: _____ Supervisor: _____

Lot: _____ Sample #: _____

Context: _____

THE SAMPLE

1. Sample Type:

carbon ____ soil ____ flotation ____ plaster ____ other (specify) _____

2. Location in lot:

_____ cm from _____

_____ cm from _____

_____ cm below suboperation datum (_____)

**show location of sample on your lot form 'base of lot' sketch or provide additional sketch on backside of this form*

3. Purpose & Description of Sample:

_____

_____

_____

_____

4. Factors Affecting Validity or Context:

_____

_____

5. Recording:

Photo #:

Drawing #:

6. Other Comments and Observations:

_____

_____

_____

*****Use backside of this form if necessary for further description/recording purposes*****

Burial Record Form – Front

Stann Creek Regional Archaeology Project **BURIAL FORM**

THE BASICS:

Site/Structure: _____ Date: _____

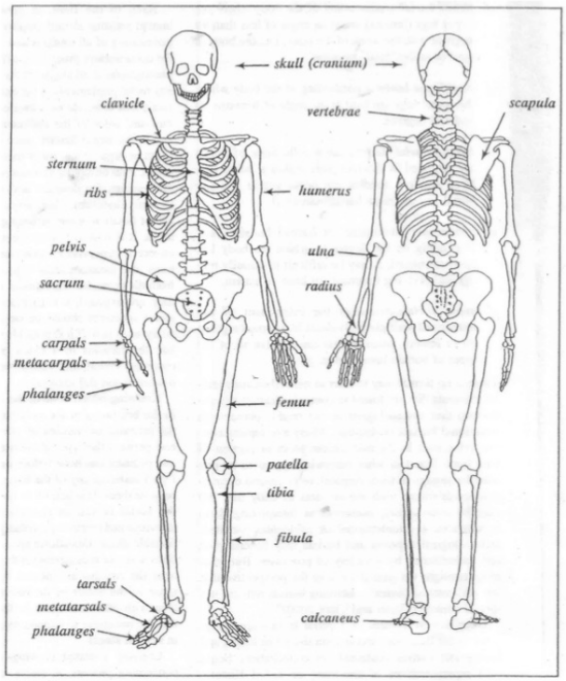
Operation: _____ Accession #: _____

Suboperation: _____ Supervisor: _____

Associated Lots: _____ Burial #: _____

Burial Context: _____

THE BURIAL & GRAVE *(shade in bones present on figure)*



1. Preservation:

Good ____ Fair ____ Poor ____

2. Completeness:

SKULL		POST-CRANIAL
_____	100%	_____
_____	> 75%	_____
_____	50-75%	_____
_____	25-50%	_____
_____	< 25%	_____
_____	0%	_____

3. Burial Type:

Extended ___ Flexed ____

Semi-Flexed ___ Seated ____

Primary ___ Second. ____

Cremated ___ Partial. Crem. ____

Articulated ___ Not Articulated ___

4. Burial Dimensions:

Maximum length (cm) _____ Orientation _____

Maximum width (cm) _____ Orientation _____

Overall orientation of burial _____ Orientation of face _____

5. Specific Measurements (cm):

Humerus _____ Radius _____ Femur _____ Tibia _____ Crown to Heel _____

1/2

*****FILL OUT THIS FORM IN ADDITION TO ASSOCIATED LOT FORMS AND ALL REQUIRED ILLUSTRATIONS*****

Burial Record Form – Reverse

Stann Creek Regional Archaeology Project **BURIAL FORM**

6. Grave Type (Welsh 1988):

Simple _____ Chultun _____ Cist _____ Crypt _____ Tomb _____ Unknown _____

7. Associated Artefacts:

8. Further Description/Observations:

9. Sketch (indicate scale):

10. Documentation & Samples:

Photo number(s): Soil samples:

Drawing numbers: Flotation samples:

Other:

*****FILL OUT THIS FORM IN ADDITION TO ASSOCIATED LOT FORMS AND ALL REQUIRED ILLUSTRATIONS*****

Artifact Bag Check-In Form (Laboratory)

SCRAP Artifact Check-In Form

Op/Subop/Lot	Context	# Bags	Excavation Date	Check In Date	Initials	Washing Date	Initials

Page ___ of ___

Bulk Artifact Catalogue Form (Laboratory)

SCRAP Bulk Artifacts Catalogue

Op/Subop/Lot	Material	Count		Wt (0.0g)	Description / Notes / Cat #	Date Analyzed	Initials
		Diag.	Non-Diag				

Page ___ of ___

Small Find Catalogue Number Form & Artifact Form (Laboratory)

SCRAP Small Finds Catalog Numbers

Category: _____

Cat #	Op/Subop/Lot	Material	Description	Date Catalogued	Initials

Page ___ of ___

STANN CREEK REGIONAL ARCHAEOLOGICAL PROJECT **SMALL FIND ARTIFACT FORM**

Cat.#: _____ DATE: _____

SITE: _____ ACCESSION #: _____

OPERATION: _____ SUPERVISOR: _____

SUBOPERATION: _____ EXCAVATORS: _____

LOT: _____

CONTEXT: _____

LOCATION IN LOT: _____

ASSOCIATED FINDS: _____

IF ASSOCIATED WITH A FLOOR LEVEL: ON FLOOR _____ WITHIN FLOOR _____

ARTIFACT: Ceramic _____ Lithic (non-obsidian chipped stone) _____

Ground stone _____ Faunal _____ Human _____

Obsidian _____ Other: _____

ARTIFACT TYPE: _____

RAW MATERIAL TYPE: _____

ARTIFACT IS COMPLETE/INCOMPLETE _____ (specify)

LENGTH (mm) _____ WIDTH (mm) _____ OTHER (mm) _____ WEIGHT (0.0 g) _____

MUNSELL COLOUR _____ TIME PERIOD _____

PHOTO #: _____ DRAWING #: _____

DESCRIPTION OF ARTIFACT:

*****SKETCH ARTIFACT ON BACK OF PAGE (SCALE 1:1 WHEN POSSIBLE)*****

Appendix C. Report of 2019 Illicit Activities (Looting) at Alabama

3 June 2019
Stann Creek Regional Archaeology Project (SCRAP)

Report of Recent Illicit Activities (Looting) at the Archaeological Site of Alabama
Report written and submitted by Dr. Meaghan Peuramaki-Brown and Dr. Shawn Morton
Report submitted to Mr. Josue Ramos, Institute of Archaeology, Belize

Dear Mr. Ramos,

Sometime between the evening of Friday, 31 May, and the evening of Sunday, 2 June 2019, an unknown person or persons entered the private orchard of Greene Groves, just outside of the village of Maya Mopan, Stann Creek District, Belize, and made their way to Block C2 in the west-central portion of the property. This area is home to numerous settlement mounds of the Alabama site (beyond the monumental core), where some of the current/2019 SCRAP permitted excavations [Permit # IA/H/2/1/19(11), Operations 9 and 10] have been taking place at the mounds and courtyard of group ALA-002 (Type VI settlement site; UTM redacted). While there, the individual(s) proceeded to pry loose architectural blocks from two excavation areas using wooden poles (recovered next to excavations), as well as from one unexcavated mound area, and continued to dig a vertical hole into one of the excavation areas. Disturbed/removed architectural blocks were classified as "fall" from platform faces, and no definite in-situ architecture was removed. It is unlikely any artifacts were recovered and/or removed. One tarp was also stolen from an excavation area. NO activity was conducted in the monumental core.

Below is a description of activities at each settlement site, along with "before" and "after" photos.

We have notified the property manager who has also viewed the damage, as well as the alcalde of Maya Mopan Village.

Sincerely,
Meaghan Peuramaki-Brown, Ph.D.
(redacted)

Shawn G. Morton, Ph.D.
(redacted

Structure ALA-002A, Operation 9, Suboperations 9A and 9D
Approximately 14 granite blocks—mostly "fall" and "slump" material—were dislodged from their positions within the excavation area (east face of platform) using a cut pole. One unit string was snapped during the process. Other than removal/prying out of large blocks, no other digging appears to have taken place at this locale.

Excavation Area Prior to Looting (non-technical photo from end of day, Friday, May 31)

Excavation Area After Looting (non-technical photo taken 3 June 2019)

Pile of 14+ architectural blocks that were disturbed/dislodged by looting (pile made by SCRAP crew after cleaning of looter's backdirt).

Structure ALA-002B

This building has not yet been subject to excavation. It was cleared of brush last week in order to prepare for unit set up and to locate architectural alignments. Looter(s) located the architectural alignment visible on the front side (east) of the platform and removed two large blocks (in forefront of image). No other digging appears to have taken place.

After Looting (no SCRAP excavations yet; non-technical photo taken 3 June 2019)

Structure ALA-002C, Operation 9, Suboperations 9B and 9C
SCRAP excavations are taking place on the west face of this platform and had exposed fallen blocks and a possible lower alignment (lower courses of face). Most blocks in the east end of Subop 9C were removed by the looter(s)—again, pried out using a large cut pole—and a hole was dug into the SE corner of Suboperation 9C, roughly 20 cm down before they individual(s) gave up. Digging appears to have been done with a machete.

Left: Excavation Area Before Looting (non-technical photo from end of day, Friday, May 31)
Right: Excavation Area After Looting (non-technical photo taken 3 June 2019)